

April 22, 2014

Project 4088115718

Mr. Jamey Watt
U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, California 94105

Subject: Phase 1 Pre-Design Investigation – Second Semiannual Groundwater Sampling Findings and Data Gap Review
North Hollywood Operable Unit, Second Interim Remedy Groundwater Remediation Design

Dear Mr. Watt:

AMEC Environment & Infrastructure, Inc. (AMEC), is pleased to submit this Phase 1 Pre-Design Investigation findings letter, on behalf of Honeywell International Inc., and Lockheed Martin Corporation to the U.S. EPA. This letter summarizes findings associated with our second of two semiannual sampling events.

If you have any questions regarding the contents in this letter, please contact Michael Taraszki at (510) 663-3996.

Sincerely yours,
AMEC Environment & Infrastructure, Inc.



Michael Taraszki, PG, CHG, PMP
Principal Hydrogeologist

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Subject: **Phase I Pre-Design Investigation – Second Semiannual Groundwater Sampling Findings and Data Gap Review**
North Hollywood Operable Unit, Second Interim Remedy
Groundwater Remediation Design

Dear Mr. Dehghi and Ms. Monteith:

This letter report presents AMEC's findings from the third and fourth quarterly groundwater-depth-measurement events and the second semiannual groundwater-sampling event conducted in 2013 at the North Hollywood Operable Unit (NHOU) as part of Honeywell International's Phase 1 Pre-Design Investigation. This report also reviews and updates the data gaps associated with the Phase 1 Pre-Design Investigation objectives that are described in the "Final Work Plan, Phase 1 Pre-Design Investigation, North Hollywood Operable Unit, Second Interim Remedy, Groundwater Remediation System Design, Revision 1" (herein referred to as the "Work Plan"), dated September 10, 2012, and submitted by AMEC to the Los Angeles Department of Water and Power (LADWP).

The quarterly groundwater-depth-measurement events discussed in this report occurred on June 20 and July 8, 2013, for the third quarterly measurements, and on September 12, 2013, for the fourth quarterly measurements. The second semiannual groundwater-sampling event occurred in June and July 2013. All activities described in this report were performed in accordance with AMEC's Sampling and Analysis Plan (SAP), dated September 2012, with the exception that additional piezometers and aquifer testing were included as recommended in the initial Phase 1 Pre-Design Investigation report,¹ and certain wells were accessed as described below. The results of the first semiannual sampling event, in December 2012, which were published on August 15, 2013, in the initial Phase 1 Pre-Design Investigation report, are referred to here for comparison with the results of the second semiannual sampling event.

¹ "Phase 1 Pre-Design Investigation – Groundwater Sampling, Vertical Flow Measurements, and Slug Test Findings Report," AMEC, August 15, 2013.

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DEPTH-TO-WATER MEASUREMENTS

To further the understanding of the groundwater flow field throughout the NHOU, depth-to-water and total well depth measurements were collected from 55 monitoring wells during the third quarterly groundwater-depth-measurement event (performed on June 20, 2013, except for two wells measured on July 8, 2013) and from 53 monitoring wells during the fourth quarterly groundwater-depth-measurement event (performed on September 12, 2013). Depth-to-water measurements and groundwater elevations are presented in Table 1. The hydrogeology of the NHOU area has historically been interpreted several ways. The most recent interpretation, based on geophysical data analyses performed on selected wells within the NHOU study area, divides the subsurface into three hydrostratigraphic units, as follows:

- The A Zone, which is generally finer grained and has a lower hydraulic conductivity relative to the B Zone, extends to depths ranging from the water table (currently ~270 feet below ground surface [bgs]) to approximately 400 feet bgs.
- The underlying B Zone, which is generally coarser grained and has a relatively higher conductivity, extends approximately 60 to 80 feet below the bottom of the A Zone.
- The deeper units underlying the B Zone, which are generally associated with higher salinity.

Groundwater elevation contours based on the four quarterly groundwater depth measurement events conducted since December 2012 are illustrated on Figures 1a through 4b, in which “a” refers to the A Zone and “b” refers to the B Zone. The eight NHOU extraction wells penetrate the A Zone. As a result, contours on figures illustrating A-Zone groundwater elevations were interpreted with respect to the influence of pumping from those extraction wells that were active.

The results of the June 2013 (third quarterly event) depth-to-water measurements yielded the following observations:

- Generally, the A-Zone potentiometric surface measured in the third quarterly event was similar to those measured in the first and second quarterly events, performed in December 2012 and March 2013, respectively.
- Analysis of measurements collected at wells screened in the A Zone indicates that the lateral hydraulic gradient in the northeastern portion of the study area was to the south-southwest with an approximate magnitude of 0.0006 foot per foot (ft/ft). To the east and southeast of this area, the groundwater flow direction rotates counterclockwise, shifting to the southeast near the former Bendix facility. Southeast of the former Bendix facility, the hydraulic flow increases to approximately 0.002 ft/ft. In the southeast corner of the NHOU, the hydraulic gradient exhibits increasing variability toward the east, where the influence of the Burbank Operable Unit (BOU) extraction wells is evident in the interpolated groundwater contours.

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- Groundwater measurements at wells NH-C09-310 and NH-VPB-02 suggest that A-Zone groundwater in the area south of the Hewitt Pit and west of the former Bendix facility may be influenced by groundwater extraction in the West Branch of the North Hollywood Wellfield, which may be inducing groundwater flow toward the west/southwest.
- Depth-to-water measurements collected in A-Zone wells NH-VPB-09 and NH-VPB-10 within the northeastern portion of the study area were not used for contouring because they are approximately 20 to 30 feet higher than those in the nearest adjacent wells also screened in the A Zone. The differences in water level elevation may be a result of inhibited groundwater flow across the Verdugo fault, which parallels the base of the Verdugo Mountains to the northeast, or associated fault splays.
- Groundwater elevation measurements collected at wells screened in the B Zone indicate that groundwater flow directions and magnitudes of lateral hydraulic gradients in this zone were generally consistent with those in the A Zone.
- Groundwater elevation measurements at collocated wells (Table 1) show slight upward or downward vertical gradients up to approximately 0.006 ft/ft between the A Zone and B Zone and within the A Zone at most locations. Although these small values approach the limit of accuracy associated with manual depth-to-water measurements, these potential vertical flow directions are consistent with electromagnetic borehole flowmeter measurements conducted at select monitoring wells, as discussed below.

The results of the September 2013 (fourth quarterly event) measurements yielded the following observations:

- Generally, groundwater elevation measurements in September 2013 were between 1 and 5 feet lower than groundwater measurements made in June 2013 (Table 1); this decrease is likely associated with increased extraction and/or reduced recharge during the drier summer months. Lateral hydraulic gradient directions and magnitudes were generally consistent with those calculated for June 2013.
- Measurements collected in September 2013 at collocated wells screened at different depths show slight downward vertical gradients up to approximately 0.006 ft/ft between the A Zone and B Zone and within the A Zone at most locations, which are likely associated with increased extraction from the deeper units during the drier summer months.

ELECTROMAGNETIC BOREHOLE FLOWMETER MEASUREMENTS

Vertical flow was measured within eight monitoring wells between June 25 and July 18, 2013, using an electromagnetic borehole flowmeter (EBF) developed by Quantum Engineering Corporation. These wells were selected specifically because they were constructed with well screens that penetrate both the A and B Zones. Flow was measured under ambient conditions (i.e., without pumping stress at the test well) within the screened interval of each well in

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accordance with the SAP. Table 2 summarizes the results of EBF profiling, and Figures 5 through 12 present graphs of flow rate data from each measured well (positive and negative values reflect upward and downward vertical flow, respectively).

The results of the vertical flow measurements yielded the following observations:

- Downward vertical flow was observed in seven of the eight wells measured. The magnitude of the downward flow in June/July was on the order of six to seven times higher than the flow recorded in December 2012 during the first semiannual Phase 1 Pre-Design Investigation groundwater sampling event, with flow rates ranging up to 1.09 gallons per minute, which is likely associated with increased groundwater extraction from the deeper zone during the drier summer months and/or reduced recharge.
- The highest downward flow rate was measured in well NH-C19-290 at a depth of 236 feet bgs.
- Upward and downward vertical flow was observed throughout well NH-C16-320, for which an absolute maximum flow of 0.15 gallons per minute was recorded. This result suggests there is not significant flow in this well; nevertheless, the June 2013 data indicate an increase over the December 2012 data.

These results further support the premise that monitoring wells and inactive production wells likely provide vertical conduits for shallow contaminated groundwater to directly migrate into the deeper aquifer.

GROUNDWATER SAMPLING

Between June 19 and August 16, 2013, low-flow sampling methods were used to collect 56 depth-discrete groundwater samples from 32 monitoring wells screened in either the A Zone or the B Zone, or across both zones. Sampling was performed in accordance with the SAP. Each sample was analyzed for the chemicals of concern (COCs), which include volatile organic compounds (VOCs) and emerging contaminants, and for inorganic water quality parameters. The analytical suites and associated methods for each sample were based on Table 2-1 of the SAP and are listed below.

- COCs
 - VOCs using EPA Methods 8260 and 524.2.
 - 1,2,3-trichloropropane using EPA Method SRL 524M-TCP.
 - 1,4-dioxane using EPA Methods 8270C and 522.
 - N-nitrosodimethylamine (NDMA) using EPA Methods 1625CM and 521.
 - N-nitrosodibutylamine (NDBA) using EPA Method 521.
 - N-nitrosodi-n-propylamine (NDPA) using EPA Method 521.

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- N-nitrosodiethylamine (NDEA) using EPA Method 521.
- N-nitrosomethyl amine (NMEA) using EPA Method 521.
- N-nitrosopyrrolidine (NPYR) using EPA Method 521.
- Perchlorate using EPA Method 314.0.
- Total chromium using EPA Method 200.8.
- Hexavalent chromium using EPA Method 218.6.
- Inorganic Groundwater Quality Parameters
 - Cations (Ca, Mg, Na, K, Fe) using EPA Method 200.7.
 - Anions (nitrate, nitrite, Cl, SO₄, total nitrate/nitrate) using EPA Method 300.0.
 - Total hardness using EPA Method 200.7.
 - Alkalinity using EPA Method SM2320B.
 - Total dissolved solids using EPA Method SM2540C.

Additional depth-discrete samples were collected from 4 wells (NH-C19-290, NH-C19-360, NH-C23-310, and NH-C23-400) for analysis of VOCs using passive diffusion bags (PDBs) to provide vertical chemistry profiles within the wells. Samples were collected at 10-foot intervals throughout the screened sections of each of the wells, beginning at 3 feet below the top of each screen. A total of 26 vertical profile samples were collected in the 4 wells.

Isoconcentration contours for the four primary COCs – trichloroethene (TCE), tetrachloroethene (PCE), 1,4-dioxane, and hexavalent chromium – in the A and B Zones are illustrated on parts “a” and “b,” respectively, of Figures 13 through 16. The contours are based on the analytical results from the following sources:

- The June/July 2013 second semiannual Phase 1 Pre-Design Investigation groundwater sampling event.
- Second-quarter 2013 data reported for the former Bendix and Lockheed Martin facilities to the EPA database.
- The most recent data available from other wells in the investigation area.

Laboratory analytical results for selected COCs from the December 2012 and June/July 2013 semiannual sampling events are summarized in Table 3 for the A Zone and Table 4 for the B Zone. Laboratory results for all detected analytes are presented in Attachment A.

Cluster wells with sampling intervals in both the A and B Zones were preferentially selected for sampling during the second semiannual Phase 1 Pre-Design Investigation groundwater sampling event to allow a comparison of depth-discrete results from those zones with historical results from the so-called Depth Region 2, which roughly corresponds to the B Zone. Additional

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wells were sampled in the second semiannual event to update data on area conditions from the first semiannual groundwater-sampling event.

In September 2013, Honeywell installed four new wells south and southwest of the former Bendix facility, as follows:

- A-Zone well NH-C26-310 to the southwest.
- B-Zone well NH-C26-385 (collocated with NH-C26-310).
- A-Zone well NH-C27-290 to the west-southwest.
- A-Zone well NH-C28-290 to the south, in the vicinity of the Pacific Steel facility.

The analytical results of groundwater samples collected from each well are presented on Figures 13a through 16b.

Analytical laboratory reports were reviewed for accuracy and completeness. Data validation was performed by a qualified third party, pursuant to the National Functional Guidelines.² Data validation results are described in Attachment C. The distribution of the primary COCs is discussed below, with a focus on concentrations greater than 10 times the maximum contaminant level (MCL) or other relevant regulatory level.

A-Zone TCE

- The lateral extent of TCE distribution in the A Zone (Figure 13a) in June/July 2013 was similar to the distribution in December 2012, but concentrations were generally lower in June and July 2013, with the exception of significantly increased concentration in groundwater from well NH-C11-295, which is located southwest of the former Hewitt Pit in the far western portion of the NHOU.
- Concentrations of TCE that exceed 50 micrograms per liter ($\mu\text{g/L}$; 10 times the 5 $\mu\text{g/L}$ MCL) are confined to three areas: wells NH-C11-295 and 4909FR located in the vicinity of the closed Hewitt Pit; several wells between NH-C27-290 and NH-C28-290 southwest of the former Bendix facility; and wells LC1-CW06, NHE-8, and 3831Q in the southeastern portion of the NHOU, which borders the BOU.
- Wells PST-MW1P and PST-MW2P at the Pacific Steel facility cannot be located and have allegedly been destroyed. The wells were located on the eastern margin of an area of TCE concentrations detected in excess of 10 times the MCL in the vicinity of NHE-3. In September 2013, well NH-C28-290 was installed adjacent to the southeast corner of the Pacific Steel facility. The analytical results of the groundwater

² Two documents are collectively known as the National Functional Guidelines, as follows: "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," U.S. Environmental Protection Agency, June 2008; and "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," U.S. Environmental Protection Agency, January 2010.

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sample collected at the well indicated that TCE was detected at a concentration of 110 µg/L, which is considerably higher than TCE concentrations measured in June 2013 at NHE-4 (to the south) and NH-C10-280 (to the east).

A-Zone PCE

- The lateral extent of PCE distribution in the A Zone in June/July 2013 was also similar to that presented in December 2012 (Figure 14a). Generally, PCE is less broadly distributed than TCE.
- With the exception of well NH-C01-325 downgradient of the Strathern Inert Landfill, GW-17-282 south of the former Bendix facility, and NH-C11-295 adjacent to the western boundary of the former Hewitt Pit, detections of PCE concentrations exceeding 50 µg/L (10 times the 5 µg/L MCL) were limited to wells east and northeast of the Lockheed Martin facility in the BOU.
- The presence of 110 µg/L of PCE in well NH-C11-295 adjacent to the southwest corner of the former Hewitt Pit represents a significant increase from the previous sample collected from the well (in December 2010), which had a concentration of 9.7 µg/L.
- East of the Lockheed Martin facility, recent groundwater data reveal a changed distribution of PCE in groundwater. The area with PCE concentrations greater than 10 times the MCL does not extend as far to the west as previously observed; however, the increased concentration in groundwater sampled from well 4948 adjacent to the northern end of the Burbank airport extends the PCE distribution farther to the north in A-Zone groundwater.
- In September 2013, well NH-C28-290 was installed adjacent to the southeast corner of the Pacific Steel facility, providing additional coverage in the area between the former Bendix facility and the downgradient NHE wells. The observed 29 µg/L is generally consistent with the results from samples collected at surrounding monitoring wells.
- The analytical results of samples collected from wells NH-C26-310 and NH-C27-290 southeast of the former Hewitt Pit in October 2013 indicated PCE concentrations of 1.7 µg/L and 4.1 µg/L, respectively. Both results are consistent with the results from samples collected at surrounding monitoring wells.

A-Zone 1,4-Dioxane

- The lateral extent of 1,4-dioxane distribution in the A Zone in June/July 2013 (Figure 15a) was similar to the distribution in December 2012, with the exceptions of the eastern border of the NHOU, where the most recent data indicate concentrations greater than the 1 µg/L notification level (NL), and the western border, where 1,4-dioxane was detected south of the former Hewitt Pit in well NH-C09-310 at a concentration of 110 µg/L. The distribution of 1,4-dioxane above the NL in the

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eastern portion of the NHOU is consistent with the limited 1,4-dioxane data presented in the adjacent portion of the BOU.³

- Analytical data from the second semiannual sampling event from wells near the former Bendix facility indicate that concentrations exceeding 10 µg/L (10 times the 1 µg/L NL) were limited to a small area.
- The analytical results from three groundwater samples collected outside the vicinity of the former Bendix facility showed a 1,4-dioxane concentration that exceeded 10 times the 1 µg/L notification level: well 4918A adjacent to the southern boundary of the Penrose Landfill, well NH-C09-310 south of the former Hewitt Pit, and well NH-C28-290 southeast of the Pacific Steel facility.
- The analytical results from a sample collected at well NH-C28-290 southeast of the Pacific Steel facility in October 2013 indicated a 1,4-dioxane concentration of 47 µg/L, which is considerably higher than concentrations detected in samples from surrounding monitoring wells.
- The analytical results from samples collected from monitoring wells NH-C26-310 and NH-C27-290 southeast of the former Hewitt Pit in October 2013 indicated 1,4-dioxane concentrations of 0.48 µg/L and 2.6 µg/L, respectively. Both results are consistent with the results from samples collected at surrounding wells.

A-Zone Hexavalent Chromium

- The lateral extent of hexavalent chromium distribution in the A Zone in June/July 2013 (Figure 16a) was generally consistent with the distribution observed in December 2012.
- Hexavalent chromium concentrations that exceeded the LADWP voluntary 5 µg/L cleanup level were primarily associated with wells in the area south of the former Bendix facility.
- The NH-C18 and NH-C21 cluster wells are located cross-gradient from (south of) the former Bendix facility and are hydraulically isolated from that facility by extraction wells NHE-2 and NHE-3. In addition to the isolated location of the wells relative to the former Bendix facility, the deeper occurrence of elevated concentrations of hexavalent chromium in these wells makes its origin(s) in this area unclear.
- Recent concentrations of hexavalent chromium in well NHE-4 slightly exceeded the voluntary cleanup level as measured in July 2013 at 5.10 µg/L; however, October 2013 results from NH-C28-290 had a concentration of 42 µg/L, which is approximately an order of magnitude higher than the concentration measured in a sample from NHE-4, immediately to the south. The shallow sample in the NH-C10 well cluster (NH-C10-280) had a result of 20 µg/l, which exceeds the cleanup level.

³“Groundwater Monitoring and Emerging Compound Report, Second Quarter 2013, Burbank Operable Unit, Burbank, California,” Arcadis, August 8, 2013.

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- The concentration in 3850AB, near the eastern boundary of the NHOU, slightly exceeded the voluntary cleanup level.
- The analytical results from samples collected from monitoring wells NH-C26-310 and NH-C27-290 southeast of the former Hewitt Pit in October 2013 yielded hexavalent chromium concentrations of 2.3 µg/L and 1.3 µg/L, respectively. Both results are consistent with the results from samples collected at surrounding monitoring wells.

B-Zone TCE

- The lateral extent of TCE distribution in the B Zone in June/July 2013 was greater than that observed in December 2012; however, the TCE concentration in NH-C05-460 during the second semiannual sampling event was lower, at 4 µg/L, than the concentration in the previous sample collected from the well (in 2010), at 120 µg/L. TCE distribution in the B Zone comprises a curving elongated plume that extends from north of Sherman Way to the west and south of the former Bendix facility (Figure 13b). The significant decrease in the TCE concentration in well NH-C05-460 in June/July 2013 shifted the plume southward as compared to the December 2012 TCE plume.
- Concentrations of TCE in the B Zone that exceeded 50 µg/L (10 times the 5 µg/L MCL) largely occur cross-gradient from the former Bendix facility, which indicates a possible source in the northern portion of the study area, possibly in the vicinity of the former Hewitt Pit.
- The analytical results from samples collected from monitoring well NH-C26-385 southeast of the former Hewitt Pit in October 2013 yielded a TCE concentration of 26 µg/L, which is consistent with the results from samples collected at surrounding wells in June 2013.

B-Zone PCE

- The lateral extent of PCE distribution in June/July 2013 was similar to that observed in December 2012. Elevated concentrations were limited to the area downgradient of the Lockheed Martin facility.
- PCE concentrations in the B Zone that exceeded 50 µg/L (10 times the 5 µg/L MCL) were limited to well LB6-CW14 at the BOU.

B-Zone 1,4-Dioxane

- The lateral extent of 1,4-dioxane distribution in the B Zone in June/July 2013 was similar to that observed in December 2012.
- The maximum concentration of 1,4-dioxane detected in the B Zone during the June/July 2013 sampling event was 2.3 µg/L in well NH-C19-360, which is located approximately 2,000 feet south of the former Hewitt Pit in the western portion of the NHOU. The analytical results from a sample collected from well 4818, immediately south of the Penrose Landfill, in December 2012 yielded a 1,4-dioxane concentration

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of 8.7 µg/L; however, the well was not sampled during the June/July 2013 sampling event.

- The analytical results from a sample collected from well NH-C26-385 in October 2013 indicated a 1,4-dioxane concentration of 2.4 µg/L and that concentrations increase toward the southwest.
- 1,4-Dioxane concentrations in the B Zone did not exceed 10 µg/L (10 times the 1 µg/L NL) in any of the samples collected during the June/July 2013 sampling event.

B-Zone Hexavalent Chromium

- The lateral extent of hexavalent chromium distribution in June/July 2013 was greater than that observed in December 2012, with higher concentrations in the area south of the former Bendix facility and south of the NHE wells.
- Detections of hexavalent chromium concentrations in wells NH-C18-365 and NH-C21-340 exceeded the LADWP voluntary cleanup level of 5 µg/L. The occurrence of hexavalent chromium in the B Zone at these locations further suggests that concentrations in this area may be distinct from those observed in the A Zone northeast of the NHE extraction wells, as discussed above.
- Detections of hexavalent chromium concentrations in wells GW-11-352, GW-11-407, and GW-16-347, which are located immediately downgradient of the former Bendix facility, exceeded the LADWP voluntary cleanup level of 5 µg/L.

TCE Vertical Profiles

- As noted above, a downward vertical gradient was observed in seven of eight wells where EBF profiling was performed, with a significant increase in magnitude observed between December 2012 and June/July 2013.
- At well NH-C10-360, which extends across both the A Zone and B Zone, downward flow in June/July 2013 was nine times higher than in December 2012. Concentrations of TCE in the well increased with depth in June/July 2013 from 1.7 µg/L at 313 feet below top of casing (btoc) to 4.4 µg/L at 340 feet btoc. By comparison, TCE concentrations in December 2012 were relatively consistent (i.e., showed little variation): 3.2 µg/L at 313 feet btoc and 3.4 µg/L at 340 feet btoc (Tables 3 and 4). The concentration of TCE in shallower groundwater (at 223 feet in well NH-C10-280) was 18 µg/L in June/July 2013.
- At well NH-C16-390, which extends across both the A Zone and B Zone, downward flow in June/July 2013 was six times higher than in December 2012. Concentrations of TCE in the well increased with depth in June/July 2013 from 22 µg/L at 343 feet btoc to 25 µg/L at 375 feet btoc. This is similar to conditions in December 2012, when TCE concentrations were 19 µg/L at 343 feet btoc and 24 µg/L at 375 feet btoc.

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- The downward flow in well NH-C19-290 was significantly higher in June/July 2013 than in December 2012. TCE concentrations detected in PDB vertical profile samples collected in July 2013 from well NH-C19-290 increased with depth through the A Zone from 8.7 to 26 µg/L (Figure 17). By comparison, TCE concentrations detected in samples collected from well NH-C19-290 in December 2012, when there was very little downward flow, were relatively consistent, ranging from 78 to 82 µg/L across the well screen.
- Similarly, the downward flow in well NH-C19-360, which extends across both the A Zone and B Zone, was significantly higher in June/July 2013 than in December 2012. The TCE concentrations in PDB samples collected in July 2013 were relatively consistent in well NH-C19-360, with concentrations at the top and bottom of the well screen at 46 µg/L and 47 µg/L, respectively; however, the PDB samples showed that concentrations in the well peaked at 67 µg/L at 313 feet btoc (Figure 18). By comparison, TCE concentrations in December 2012 samples decreased with depth from 69 µg/L at 303 feet btoc to 44 µg/L at 353 feet btoc.
- In A-Zone well NH-C23-310, significant downward flow was measured in June/July 2013 compared to a slight upward flow in December 2012. TCE concentrationsPDB vertical profile samples collected in July 2013 from NH-C23-310 increased with depth from 1.3 µg/L at 253 feet btoc to 3.5 µg/L at 303 feet btoc (Table 3 and Figure 19). By comparison, TCE concentrations in December 2012 were relatively consistent, ranging from 1.7 µg/L at 253 feet btoc to 2.0 µg/L at 303 feet btoc.
- The downward vertical flow in B-Zone well NH-C23-400 was approximately seven times higher in June/July 2013 than in December 2012. The TCE concentrations measured in PDB vertical profile samples collected in July 2013 from NH-C23-400 increased with depth, peaking at 0.80 µg/L in the sample from 393 feet btoc (Figure 20). However, TCE concentrations at the top and bottom of the screened interval were measured at 48 and 48 µg/L, respectively, in the low-flow samples collected in June/July 2013, which suggests that the PDB samples may not be representative of conditions in the well.

PCE Vertical Profiles

- As we have already noted, a downward vertical gradient was observed in seven of eight wells where EBF profiling was performed, with a significant increase in magnitude observed between December 2012 and June/July 2013. All PCE concentrations, however, remained below the maximum contaminant level of 5 ppb.
- At well NH-C10-360, which extends across both the A Zone and the B Zone, downward flow in June/July 2013 was nine times higher than in December 2012. Concentrations of PCE in the well increased with depth in June/July 2013 from 1.0 µg/L at 313 feet btoc to 3.2 µg/L at 340 feet btoc. By comparison, PCE concentrations decreased with depth in December 2012 from 3.3 µg/L at 313 feet btoc to 2.2 µg/L at 340 feet btoc.

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- At well NH-C16-390, which extends across both the A Zone and the B Zone, downward flow in June/July 2013 was six times higher than in December 2012. PCE concentrations in the well decreased with depth in June/July 2013 from 3.0 µg/L at 343 feet btoc to 1.5 µg/L at 375 feet btoc. By comparison, PCE concentrations in December 2012 increased slightly with depth from 1.5 µg/L at 343 feet btoc to 2.0 µg/L at 375 feet btoc.
- The downward flow in well NH-C19-290 was significantly higher in June/July 2013 than in December 2012. PCE concentrations measured in PDB vertical profile samples collected in July 2013 from NH-C19-290 increased with depth through the A Zone from 0.23 to 2.2 µg/L (Table 3 and Figure 17). By comparison, PCE concentrations measured in well NH-C19-290 in December 2012, when there was very little downward flow, were relatively consistent as a function of depth, with concentrations ranging from 1.6 to 2.1 µg/L across the well screen.
- Similarly, the downward flow in well NH-C19-360, which extends across both the A Zone and B Zone, was significantly higher in June/July 2013 than in December 2012. PCE concentrations in PDB samples collected from well NH-C19-360 in July 2013 were relatively consistent, ranging from 1.8 to 3.2 µg/L, with concentrations in the well peaking at 313 feet btoc (Tables 3 and 4 and Figure 18). In December 2012, PCE concentrations were similarly stable, ranging from 2.0 to 3.3 µg/L.
- In well NH-C23-310, significant downward flow was measured in June/July 2013 compared to a slight upward flow in December 2012. PCE concentrations measured in A-Zone PDB vertical profile samples collected in July 2013 from NH-C23-310 increased with depth from 0.25 µg/L at 253 feet btoc to 0.87 µg/L at 303 feet btoc (Table 3 and Figure 19). Similarly, PCE concentrations in December 2012 increased with depth from 1.2 µg/L at 253 feet btoc to 2.3 µg/L at 303 feet btoc.
- Downward vertical flow in B-Zone well NH-C23-400 was approximately seven times higher in June/July 2013 than in December 2012. PCE was not detected in any of the PDB vertical profile samples collected in July 2013 (Figure 20); however, based on PCE concentrations in the low-flow samples collected in June/July 2013 at the top and bottom of the screened interval of 1.6 and 1.2 µg/L, respectively, the PDB samples do not appear to be representative of conditions in the well.

Inorganic Groundwater Quality Parameter Evaluation

- Several inorganic groundwater quality parameters were selected for analysis during the second semiannual Phase 1 Pre-Design Investigation groundwater sampling event (June/July 2013), including major cations (calcium, sodium, manganese, and potassium) and anions (nitrate, sulfate, chloride, and carbonate). Carbonate was reflected in a total alkalinity analysis as calcium carbonate. The results of these analyses were plotted on Piper diagrams using AqQA software (Rockware). Piper, or trilinear, diagrams plot general water quality data in a form that visually differentiates samples based on relative percent differences for specific anions and/or cations.

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- The figures presented in Attachment B (Figures B-1 through B-3) suggest generally similar water quality parameters in all wells, and in B-Zone wells in particular. Analytical data from A-Zone wells suggest a slightly greater variability in water quality parameters than might be expected, perhaps due to the influence of surface infiltration and the vulnerability to various surface sources.

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- As with the first semiannual event, the general chemistry signatures for the groundwater sample collected from the A Zone from wells 4909C at 293 feet btoc and NH-C18 at 270 feet btoc were significantly different from the other samples (Figures B-1 and B-2). In addition, analytical data from NH-C11 at 295 feet btoc, NH-C17 at 255 feet btoc, and NH-C21 at 260 feet btoc indicated chemical signatures that were distinct from analytical data from other wells sampled during the second event (samples from NH-C11 and NH-C17 were not analyzed for major ions during the previous sampling event). These wells are either near or downgradient from the former Hewlett Pit area, which may suggest that landfill material has impacted groundwater chemistry.
- Analytical data indicate an ionic balance within 10 percent but also indicate a surplus of cations and a deficit of anions. Approximately 40 percent of samples exceeded a two percent imbalance for both events.

Groundwater Monitoring Event	Maximum Imbalance (%)	Average Imbalance (%)
Dec 2012/Jan 2013	4.94	1.86
June/July 2013	4.73	1.67

SUMMARY OF DEVIATIONS FROM THE WORK PLAN

Investigation activities included in the 2012 Work Plan that could not be completed between June and September 2013 are summarized below. Quarterly groundwater level measurements could not be collected at the following wells for a variety of reasons:

- 4909C in June 2013 – Access was not granted by Vulcan Materials.
- NH-VPB-04 in December 2012 and March and September 2013 – A car was parked above it. NH-VPB-04 was intended as a substitute for NH-C04-240, which was specified in the Work Plan.
- The NH-C02 cluster – The road had been repaved and the wells were covered with asphalt.
- NH-C21-260 and NH-C21-340 – Not accessible in June 2013; however, the wells were gauged in July 2013.

Based on recommendations presented in the August 15, 2013, initial Phase 1 Pre-Design Investigation report, additional groundwater sampling was performed beyond the regimen prescribed in the Work Plan.

- The following wells were added: NH-C05-460, NH-C07-300, NH-C09-310, NH-C10-280, NH-C11-295, NH-C17-255, and 3831Q.
- NH-C15-330 was sampled.



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Groundwater samples could not be collected from the following wells:

- PST-MW-1P and PST-MW-2P at the Pacific Steel treating facility – Could not be located and are assumed to have been destroyed, although records indicating their destruction cannot be found.
- 4909FR (replacement well) was sampled in the second semiannual event – Well 4909F was destroyed by Vulcan Materials.
- 4918A – Well construction issues (i.e., structural integrity of the well casing) and concerns about being able to retrieve sampling pump.
- 4928A – Access was denied by Los Angeles County.
- NH-10 – Well has been destroyed.

Vertical flow monitoring could not be performed in the following wells:

- NH-C05-320 and NH-C05-460 – Installed pumps could not be removed.

Drilling activities, piezometer installation, and aquifer testing could not be performed because of difficulty securing site access. This work is now planned to begin in mid-2014.

REVIEW OF DATA GAPS

As described in the Work Plan, the Phase I Pre-Design Investigation objectives were intended to address critical data gaps before proceeding with the preliminary design phase of the Second Interim Remedy. This section reviews the status of the data gaps that the Phase I Pre-Design Investigation was intended to address. The data gaps will be reviewed further after piezometers have been installed and aquifer testing activities have been completed. The following discussion corresponds to the 10 data gaps presented in Table 2-1 of the Phase 1 Pre-Design Investigation Work Plan.

1. *Recent analytical data are insufficient to delineate the lateral and vertical distribution of COC mass (and temporal variability) in the A-Zone and B-Zone and to define the necessary target capture area required to achieve the Second Interim Remedy RAOs [remedial action objectives]. This data gap applies both to areas throughout the NHOU study area and to areas near the existing NHOU extraction wells.*

The two completed rounds of semiannual groundwater sampling have significantly improved the lateral and vertical delineation of COCs. Figures 13a through 16b of this report illustrate the COC distribution within the A and B Zones during the second semiannual monitoring event. Additionally, Figures 1a through 4b of the 2013 initial Phase 1 Pre-Design Investigation report illustrate the COC distribution within the A and B Zones during the first semiannual monitoring event. Uncertainty about the delineation of COC mass in the following areas may limit the ability to accurately define the target capture area as required to achieve the Second Interim Remedy RAOs.

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- TCE, PCE, and 1,4-dioxane in the A Zone along the western boundary of the NHOU, especially west and south of wells NH-C11 and NH-C09.
- PCE in the A Zone southeast of the Strathern Inert Landfill, between wells NH-C01 and 4948.
- TCE in the B Zone southwest of the Hewitt Pit beneath A-Zone well NH-C11.
- TCE in the B Zone along the western boundary of the NHOU, southwest of wells NH-C18-365 and NH-C21-340.
- Vertical delineation of the impacts to groundwater observed in B-Zone wells NH-C18-365 and NH-C21-340 is inadequate to define the lower boundary of the high-concentration portions of the plume.

Deep grab groundwater samples planned during the installation of the proposed piezometers PZ-NHE-2 and PZ-NHE-4, in addition to data from other wells recently installed by LADWP and Honeywell, are expected to provide additional groundwater data that will help further constrain the current distribution of COCs in the A and B Zones.

Based on a comparison of the first and second semiannual groundwater monitoring events, under current pumping conditions, seasonal variability of COC concentrations appears to be minor. Additional data from third-party sources, once available, may further delineate the lateral and vertical extent of COCs. This data gap will be further evaluated at the completion of the Phase I Pre-Design Investigation.

2. *Groundwater elevation data have not been measured from a sufficient number of wells surveyed to a common elevation datum (e.g., North American Vertical Datum of 1988 [NAVD88]) to verify and clarify groundwater flow directions, particularly north of Sherman Way.*

Twenty-nine wells were surveyed on December 20, 2012, relative to the NAVD88 Datum⁴. The current monitoring well network provides sufficient consistency to verify groundwater flow directions. This data gap has been sufficiently addressed.

⁴ North American Vertical Datum of 1988

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3. *Aquifer test results are insufficient to estimate hydraulic parameters specific to the A-Zone or B-Zone; these estimates are needed to accurately simulate groundwater flow directions, determine NHE hydraulic capture areas, and estimate influent pumping rates to the Second Interim Remedy treatment system. The monitoring well network is insufficient to characterize vadose zone and groundwater conditions beneath known and potential source areas to further delineate the lateral and vertical distribution of COC mass within the NHOU source area to achieve Second Interim Remedy RAOs.*

Installation of three piezometer pairs adjacent to NHOU extraction wells NHE-2, NHE-4, and NHE-7 is currently planned for mid-2014. Installation activities included in the Work Plan will proceed after an access arrangement with LADWP (property owner) has been signed. Once piezometer installation activities have been completed, aquifer testing will be performed to improve the estimation of hydraulic parameters. This data gap should be revisited once the piezometer installation and aquifer testing are complete.

4. *The monitoring well network is insufficient to characterize vadose zone and groundwater conditions beneath known and potential source areas to further delineate the lateral and vertical distribution of COC mass within the NHOU source area to achieve Second Interim Remedy RAOs.*

The Phase I Pre-Design Investigation is not intended to address this data gap.

5. *The EPA's SFB RI groundwater monitoring network is inadequate to achieve Second Interim Remedy RAOs. Recently installed wells in the NHOU have not yet been incorporated into this program. Sampling methods need to be revised such that groundwater samples are collected from depths that specifically relate to either the A-Zone or the B-Zone. Not all wells used for measuring groundwater elevation have been surveyed to the same vertical datum, while reference elevations on old wells may have undergone change (e.g., settlement, grade changes, wellhead maintenance).*

The Phase I Pre-Design Investigation is not intended to address this monitoring data gap, rather this data gap will be addressed (in part) with the development of a Groundwater Monitoring Plan pursuant to the AOC. The Phase I Pre-Design Investigation has provided a resurvey of many NHOU wells to the NAVD88 datum.

6. *Objective projections of pumping and recharge rates, including beyond year 2015, are not yet available; this prevents meaningful simulation of future groundwater flow conditions and elevations pertinent to the Second Interim Remedy design.*

The Phase I Pre-Design Investigation is not intended to address this data gap; rather, this data gap will be addressed once a Groundwater Management Plan has been finalized, as stipulated in the ROD (record of decision).

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7. *Performance monitoring wells have not been installed and monitored to demonstrate the size and shape of the existing NHOU extraction well capture area. Similarly, drawdown measurements at each extraction well have not been recorded for calculating well efficiency changes over time to support the need for well rehabilitation.*

As described in the revised Work Plan Addendum, approved by the EPA on March 6, 2014, the originally proposed drilling and aquifer testing activities and methods have been modified. Installation of three piezometer pairs at NHE-2, NHE-4, and NHE-7 is currently planned for mid-2014. The need for rehabilitation of well NHE-4, which is one of the wells proposed for aquifer testing, will also be assessed. Once the piezometer installation is completed, aquifer testing will be performed to improve the estimation of hydraulic parameters and provide empirical data about the potential capture zone associated with the existing extraction wells. This data gap will be revisited once the aquifer testing is completed.

8. *The existing numerical groundwater flow model is not sufficiently structured or discretized vertically to evaluate hydraulic capture specifically within the A-Zone and potentially the B-Zone.*

This data gap will be revisited once the aquifer testing described above for Data Gap No. 7 is completed. The empirical data obtained will be used to refine and recalibrate the groundwater model, which will be further modified, as necessary, to support the Second Interim Remedy design.

9. *Available analytical data are insufficient to assess A-Zone source water to the new NHOU treatment system to meet CDPH 97-005 requirements.*

This data gap will be revisited once the aquifer testing and the Groundwater Modeling Memorandum are complete. Analytical data from select groundwater samples collected by LADWP to address CDPH 97-005 requirements were provided in March 2014. These data and future data reports from LADWP will be evaluated with respect to the NHOU Second Interim Remedy design.

10. *Vertical conduits throughout the NHOU study area have not been sufficiently evaluated to quantify the volume of groundwater and COC mass that is induced to depths below the A-Zone in response to various municipal pumping patterns or scenarios.*

The Phase I Pre-Design Investigation is not intended to fully address this data gap. However, vertical flow measurements through long-screened monitoring wells that provide cross-communication between the A-Zone and B-Zone units demonstrate that vertical flow is predominantly downward and that flow rates significantly increase during summer months, which is consistent with increased pumping rates from production wells typically screened below the B Zone. The implication is that larger-

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diameter inactive production wells screened over greater depths (including wells comprising the North Hollywood East Branch) may convey significant amounts of contaminated groundwater from the A Zone to deeper units within the NHOU area.

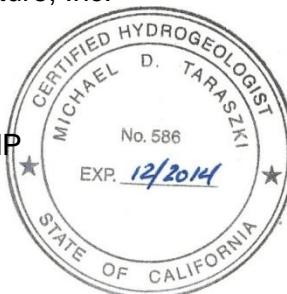
As we have mentioned above, remaining elements of the Phase 1 Pre-Design Investigation include the installation of piezometer pairs adjacent to NHOU extraction wells NHE-2, NHE-4, and NHE-7 and aquifer testing at each extraction well. The findings will provide valuable hydraulic parameter data for the A Zone and empirical data about the potential capture zone associated with the existing NHOU extraction well field. Results from the aquifer tests will be summarized with results from other pre-design activities in a Phase 1 Pre-Design Report and will be incorporated into the Groundwater Modeling Memorandum. The groundwater flow model will be used, in part, to develop the basis of the extraction well field design needed to achieve the RAOs associated with the NHOU Second Interim Remedy design.

Please contact either of the undersigned at (510) 663-3996 if you have any questions regarding this matter.

Sincerely yours,
 AMEC Environment & Infrastructure, Inc.



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MT/GFS/cpr
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- Attachment A Results of Detected Analytes
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TABLES

TABLE 1
GROUNDWATER ELEVATIONS

 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Station Name	Zone	Date	Casing Elevations (feet, NAVD88)	Depth to Water (feet)	Water Level Elevation (feet NAVD88)	Comments
4909C	A and B	17-Dec-12	757.02	249.02	508.00	
		7-Mar-13	757.02	250.22	506.80	
		20-Jun-13	757.02	NM	--	Access not granted
		12-Sep-13	757.02	256.70	500.32	
4918A	A	17-Dec-12	807.48	295.75	511.73	
		7-Mar-13	807.48	296.14	511.34	
		20-Jun-13	807.48	297.30	510.18	
		12-Sep-13	807.48	300.46	507.02	
4919D	A	17-Dec-12	769.96	261.44	508.52	
		7-Mar-13	769.96	261.98	507.98	
		20-Jun-13	769.96	262.52	507.44	
		12-Sep-13	769.96	NM	--	
LC1-CW01	Deep	18-Dec-12	739.96	236.67	503.29	
		7-Mar-13	739.96	236.45	503.51	
		20-Jun-13	739.96	237.64	502.32	
		12-Sep-13	739.96	238.61	501.35	
LC1-CW02	B	18-Dec-12	740.15	237.98	502.17	
		7-Mar-13	740.15	237.49	502.66	
		20-Jun-13	740.15	238.10	502.05	
		12-Sep-13	740.15	239.94	500.21	
LC1-CW03	A	18-Dec-12	740.46	238.43	502.03	
		7-Mar-13	740.46	237.95	502.51	
		20-Jun-13	740.46	238.33	502.13	
		12-Sep-13	740.46	240.51	499.95	
NH-C01-325	A	18-Dec-12	783.66	274.60	509.06	
		7-Mar-13	783.66	274.73	508.93	
		20-Jun-13	783.66	275.43	508.23	
		12-Sep-13	783.66	278.78	504.88	
NH-C01-450	A and B	18-Dec-12	783.63	274.19	509.44	
		7-Mar-13	783.63	274.64	508.99	
		20-Jun-13	783.63	275.31	508.32	
		12-Sep-13	783.63	278.49	505.14	
NH-C01-660	Deep	18-Dec-12	783.73	274.10	509.63	
		7-Mar-13	783.73	275.39	508.34	
		20-Jun-13	783.73	277.17	506.56	
		12-Sep-13	783.73	280.48	503.25	
NH-C01-780	Deep	18-Dec-12	783.74	274.11	509.63	
		7-Mar-13	783.74	275.71	508.03	
		20-Jun-13	783.74	278.19	505.55	
		12-Sep-13	783.74	281.30	502.44	
NH-C02-220	A	17-Dec-12	660.32	170.11	490.21	
		7-Mar-13	660.32	NM	--	Paved over
		20-Jun-13	660.32	NM	--	Paved over
NH-C02-325	B	17-Dec-12	659.42	169.07	490.35	
		7-Mar-13	659.42	NM	--	Paved over
		20-Jun-13	659.42	NM	--	Paved over
NH-C02-520	Deep	17-Dec-12	659.89	165.82	494.07	
		7-Mar-13	659.89	NM	--	Paved over
		20-Jun-13	659.89	NM	--	Paved over

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Station Name	Zone	Date	Casing Elevations (feet, NAVD88)	Depth to Water (feet)	Water Level Elevation (feet NAVD88)	Comments
NH-C02-681	Deep	17-Dec-12	659.87	160.71	499.16	
		7-Mar-13	659.87	NM	--	Paved over
		20-Jun-13	659.87	NM	--	Paved over
NH-C03-380	B	17-Dec-12	711.34	206.70	504.64	
		7-Mar-13	711.34	207.06	504.28	
		20-Jun-13	711.34	208.59	502.75	
		12-Sep-13	711.34	211.84	499.50	
NH-C03-580	Deep	17-Dec-12	710.80	207.86	502.94	
		7-Mar-13	710.80	208.03	502.77	
		20-Jun-13	710.80	211.39	499.41	
		12-Sep-13	710.80	213.33	497.47	
NH-C03-680	Deep	17-Dec-12	711.52	205.94	505.58	
		7-Mar-13	711.52	207.00	504.52	
		20-Jun-13	711.52	210.33	501.19	
		12-Sep-13	711.52	214.41	497.11	
NH-C03-800	Deep	17-Dec-12	710.75	204.65	506.10	
		7-Mar-13	710.75	206.55	504.20	
		20-Jun-13	710.75	209.75	501.00	
		12-Sep-13	710.75	212.03	498.72	
NH-C05-320	A	17-Dec-12	775.03	266.67	508.36	
		7-Mar-13	775.03	265.80	509.23	
		20-Jun-13	775.03	266.41	508.62	
		12-Sep-13	775.03	270.39	504.64	
NH-C05-460	B	17-Dec-12	774.85	266.65	508.20	
		7-Mar-13	774.85	266.38	508.47	
		20-Jun-13	774.85	267.24	507.61	
		12-Sep-13	774.85	271.58	503.27	
NH-C08-295	A	17-Dec-12	737.88	232.96	504.92	
		7-Mar-13	737.88	232.62	505.26	
		20-Jun-13	737.88	233.35	504.53	
		12-Sep-13	737.88	236.64	501.24	
NH-C09-310	A	17-Dec-12	736.83	230.55	506.28	
		7-Mar-13	736.83	231.43	505.40	
		20-Jun-13	736.83	232.34	504.49	
		12-Sep-13	736.83	237.46	499.37	
NH-C10-280	A	17-Dec-12	710.04	206.94	503.10	
		7-Mar-13	710.04	206.71	503.33	
		20-Jun-13	710.04	207.74	502.30	
		12-Sep-13	710.04	211.15	498.89	
NH-C10-360	A and B	17-Dec-12	710.15	206.87	503.28	
		7-Mar-13	710.15	206.86	503.29	
		20-Jun-13	710.15	208.11	502.04	
		12-Sep-13	710.15	211.70	498.45	
NH-C11-295	A	18-Dec-12	730.87	221.62	509.25	
		7-Mar-13	730.87	223.42	507.45	
		20-Jun-13	730.87	224.22	506.65	
		12-Sep-13	730.87	229.75	501.12	

TABLE 1
GROUNDWATER ELEVATIONS

 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Station Name	Zone	Date	Casing Elevations (feet, NAVD88)	Depth to Water (feet)	Water Level Elevation (feet NAVD88)	Comments
NH-C12-280	A	17-Dec-12	705.35	208.75	496.60	
		7-Mar-13	705.35	207.01	498.34	
		20-Jun-13	705.35	207.67	497.68	
		12-Sep-13	705.35	210.79	494.56	
NH-C12-360	A and B	17-Dec-12	705.31	208.23	497.08	
		7-Mar-13	705.31	206.72	498.59	
		20-Jun-13	705.31	207.94	497.37	
		12-Sep-13	705.31	211.21	494.10	
NH-C13-385	A and B	17-Dec-12	760.47	251.78	508.69	
		7-Mar-13	760.47	252.73	507.74	
		20-Jun-13	760.47	253.48	506.99	
		12-Sep-13	760.47	258.70	501.77	
NH-C14-250	A	17-Dec-12	694.20	195.19	499.01	
		7-Mar-13	694.20	194.13	500.07	
		20-Jun-13	694.20	194.61	499.59	
		12-Sep-13	694.20	198.24	495.96	
NH-C15-240	A	17-Dec-12	679.04	181.28	497.76	
		7-Mar-13	679.04	179.66	499.38	
		20-Jun-13	679.04	181.71	497.33	
		12-Sep-13	679.04	184.90	494.14	
NH-C15-330	A and B	17-Dec-12	679.11	180.91	498.20	
		7-Mar-13	679.11	179.56	499.55	
		20-Jun-13	679.11	183.70	495.41	
		12-Sep-13	679.11	186.90	492.21	
NH-C16-320	A	17-Dec-12	777.29	268.20	509.09	
		7-Mar-13	777.29	268.20	509.09	
		20-Jun-13	777.29	268.78	508.51	
		12-Sep-13	777.29	272.55	504.74	
NH-C16-390	A and B	17-Dec-12	777.33	268.28	509.05	
		7-Mar-13	777.33	268.39	508.94	
		20-Jun-13	777.33	269.05	508.28	
		12-Sep-13	777.33	272.83	504.50	
NH-C17-255	A	17-Dec-12	675.61	183.18	492.43	
		7-Mar-13	675.61	181.98	493.63	
		20-Jun-13	675.61	182.79	492.82	
		12-Sep-13	675.61	185.63	489.98	
NH-C17-339	A and B	17-Dec-12	675.77	182.49	493.28	
		7-Mar-13	675.77	181.54	494.23	
		20-Jun-13	675.77	183.88	491.89	
		12-Sep-13	675.77	186.51	489.26	
NH-C18-270	A	17-Dec-12	717.87	212.97	504.90	
		7-Mar-13	717.87	211.71	506.16	
		20-Jun-13	717.87	212.05	505.82	
		12-Sep-13	717.87	NM	--	Parked over
NH-C18-365	A and B	17-Dec-12	717.96	213.18	504.78	
		7-Mar-13	717.96	212.68	505.28	
		20-Jun-13	717.96	213.63	504.33	
		12-Sep-13	717.96	217.51	500.45	

TABLE 1
GROUNDWATER ELEVATIONS

 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Station Name	Zone	Date	Casing Elevations (feet, NAVD88)	Depth to Water (feet)	Water Level Elevation (feet NAVD88)	Comments
NH-C19-290	A	17-Dec-12	732.23	226.03	506.20	
		7-Mar-13	732.23	225.79	506.44	
		20-Jun-13	732.23	226.14	506.09	
		12-Sep-13	732.23	230.52	501.71	
NH-C19-360	A and B	17-Dec-12	732.08	225.55	506.53	
		7-Mar-13	732.08	226.22	505.86	
		20-Jun-13	732.08	227.01	505.07	
		12-Sep-13	732.08	231.33	500.75	
NH-C20-380	A and B	18-Dec-12	749.34	241.44	507.90	
		7-Mar-13	749.34	242.33	507.01	
		20-Jun-13	749.34	243.28	506.06	
		12-Sep-13	749.34	247.52	501.82	
NH-C21-260	A	18-Dec-12	704.85	201.09	503.76	
		7-Mar-13	704.85	200.66	504.19	
		8-Jul-13	704.85	202.15	502.70	
		12-Sep-13	704.85	204.67	500.18	
NH-C21-340	A and B	18-Dec-12	705.06	201.04	504.02	
		7-Mar-13	705.06	201.30	503.76	
		8-Jul-13	705.06	203.75	501.31	
		12-Sep-13	705.06	206.05	499.01	
NH-C22-360	A	18-Dec-12	802.34	292.09	510.25	
		7-Mar-13	802.34	291.56	510.78	
		20-Jun-13	802.34	292.97	509.37	
		12-Sep-13	802.34	296.94	505.40	
NH-C22-460	B	17-Dec-12	802.62	292.34	510.28	
		7-Mar-13	802.62	291.99	510.63	
		20-Jun-13	802.62	293.23	509.39	
		12-Sep-13	802.62	297.40	505.22	
NH-C22-600	D	17-Dec-12	802.50	292.16	510.34	
		7-Mar-13	802.50	292.21	510.29	
		20-Jun-13	802.50	293.53	508.97	
		12-Sep-13	802.50	297.83	504.67	
NH-C23-310	A	17-Dec-12	745.50	238.76	506.74	
		7-Mar-13	745.50	238.66	506.84	
		20-Jun-13	745.50	239.19	506.31	
		12-Sep-13	745.50	243.13	502.37	
NH-C23-400	A and B	17-Dec-12	745.49	238.52	506.97	
		7-Mar-13	745.49	238.84	506.65	
		20-Jun-13	745.49	239.60	505.89	
		12-Sep-13	745.49	243.65	501.84	
NH-C24-305	A	17-Dec-12	731.44	228.05	503.39	
		7-Mar-13	731.44	227.56	503.88	
		20-Jun-13	731.44	228.25	503.19	
		12-Sep-13	731.44	231.41	500.03	
NH-C24-410	B	17-Dec-12	731.48	228.03	503.45	
		7-Mar-13	731.48	227.64	503.84	
		20-Jun-13	731.48	228.62	502.86	
		12-Sep-13	731.48	231.82	499.66	

TABLE 1
GROUNDWATER ELEVATIONS

 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Station Name	Zone	Date	Casing Elevations (feet, NAVD88)	Depth to Water (feet)	Water Level Elevation (feet NAVD88)	Comments
NH-C25-290	A	18-Dec-12	725.70	228.10	497.60	
		7-Mar-13	725.70	227.35	498.35	
		20-Jun-13	725.70	227.79	497.91	
		12-Sep-13	725.70	230.26	495.44	
NH-VPB-02	A	18-Dec-12	712.28	206.98	505.30	
		7-Mar-13	712.28	207.09	505.19	
		20-Jun-13	712.28	207.38	504.90	
		12-Sep-13	712.28	212.59	499.69	
NH-VPB-03	A	17-Dec-12	677.84	177.09	500.75	
		7-Mar-13	677.84	176.01	501.83	
		20-Jun-13	677.84	175.98	501.86	
		12-Sep-13	677.84	178.79	499.05	
NH-VPB-04	A	17-Dec-12	634.12	NM	--	Parked over
		7-Mar-13	634.12	NM	--	Parked over
		20-Jun-13	634.12	142.60	491.52	
		12-Sep-13	634.12	NM	--	Parked over
NH-VPB-05	A	17-Dec-12	657.94	169.74	488.20	
		7-Mar-13	657.94	168.44	489.50	
		20-Jun-13	657.94	169.04	488.90	
		12-Sep-13	657.94	171.60	486.34	
NH-VPB-06	A	18-Dec-12	749.41	241.72	507.69	
		7-Mar-13	749.41	242.46	506.95	
		20-Jun-13	749.41	243.28	506.13	
		12-Sep-13	749.41	247.63	501.78	
NH-VPB-07	A	17-Dec-12	757.99	251.34	506.65	
		7-Mar-13	757.99	251.03	506.96	
		20-Jun-13	757.99	251.71	506.28	
		12-Sep-13	757.99	254.96	503.03	
NH-VPB-08	A	18-Dec-12	670.49	174.79	495.70	
		7-Mar-13	670.49	173.48	497.01	
		20-Jun-13	670.49	177.70	492.79	
		12-Sep-13	670.49	180.98	489.51	
NH-VPB-09	A	17-Dec-12	796.85	257.89	538.96	
		7-Mar-13	796.85	259.48	537.37	
		20-Jun-13	796.85	261.06	535.79	
		12-Sep-13	796.85	265.24	531.61	
NH-VPB-10	A	18-Dec-12	765.92	235.93	529.99	
		7-Mar-13	765.92	236.20	529.72	
		20-Jun-13	765.92	236.38	529.54	
		12-Sep-13	765.92	237.44	528.48	
NH-VPB-11	A	18-Dec-12	792.42	282.68	509.74	
		7-Mar-13	792.42	283.62	508.80	
		20-Jun-13	792.42	286.40	506.02	
		12-Sep-13	792.42	291.43	500.99	

TABLE 1**GROUNDWATER ELEVATIONS**

Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
Los Angeles County, California

Notes:

1. Depth to water is measured from top of well casing
2. Cluster monitoring wells with the same station names (e.g., **NH-C05-XXX**) are collocated

Abbreviations:

- = not applicable
NM = not measured

TABLE 2

VERTICAL FLOW MEASUREMENT RESULTS
 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Well	Date Tested	Top of Screen [feet bgs]	Bottom of Screen [feet bgs]	Geological unit assignment (estimated)	A/B zone contact [feet bgs]	Max Flow Rate [gpm] ¹	In/Out Inflection Depth [feet bgs]	Comments
NH-C05-460	1/17/2013	390	460	B Zone	349.33	0.128	N/A	Upward flow between 390 and 398 feet bgs and below. Could not profile entire screened interval due to data cable length restriction.
NH-C10-280	12/12/2012	220	280	A Zone	320.74	-0.04	272	Downward flow between 242 and 280 feet bgs.
	6/26/2013	220	280	A Zone	320.74	-0.84	254	Downward flow between 222 and 280 feet bgs.
NH-C10-360	12/12/2012	310	360	A and B Zone	320.74	-0.21	342	Downward flow between 320 and 360 feet bgs. Greatest downward flow rate of any well tested.
NH-C10-360	6/27/2013	310	360	A and B Zone	320.74	-0.87	346	Downward flow between 316 and 360 feet bgs. Greatest downward flow rate of any well tested.
NH-C16-320	12/10/2012	250	300	A and B Zone	359.61	-0.07	N/A	No significant flow.
	6/25/2013	250	300	A and B Zone	359.61	0.15	N/A	No significant flow.
NH-C16-390	12/10/2012	340	390	A Zone	359.61	-0.085	366	Downward flow between 358 and 390 feet bgs.
	6/25/2013	340	390	A Zone	359.61	-0.59	370	Downward flow between 342 and 386 feet bgs.
NH-C19-290	1/28/2013	230	290	A Zone	337.5	-0.032	270	Downward flow between 260 and 280 feet bgs.
	7/18/2013	230	290	A Zone	337.5	-1.09	248	Downward flow between 230 and 290 feet bgs. Water primarily entering above 234 and exiting below 256 feet bgs.
NH-C19-360	1/28/2013	300	360	A and B Zone	337.5	-0.08	342	Downward flow between 310 and 360 feet bgs.
	7/18/2013	300	360	A and B Zone	337.5	-0.37	342	Downward flow between 310 and 358 feet bgs.
NH-C23-310	1/17/2013	250	310	A Zone	340	0.165	294	Upward flow between 268 and 310 feet bgs.
	6/26/2013	250	310	A Zone	340	-0.95	300	Downward flow between 250 and 310 feet bgs.
NH-C23-400	12/10/2012	340	400	B Zone	340	-0.09	366	Downward flow between 351 and 390 feet bgs.
	6/26/2013	340	400	B Zone	340	-0.68	362	Downward flow between 340 and 400 feet bgs.

Notes

1. Negative values reflect downward flow, positive values reflect upward flow

Abbreviations

bgs = below ground surface

TABLE 3

SUMMARY OF RECENT ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	Test Method	EPA 521	EPA 522	EPA 524M-TCP	EPA 524.2		EPA 218.6	EPA 314.0
		Analyte/ Units:	N-Nitrosodimethylamine (ng/L)	1,4-Dioxane (µg/L)	1,2,3-Trichloropropane (µg/L)	Tetrachloroethene (µg/L)	Trichloroethene (µg/L)	Chromium VI (µg/L)	Perchlorate (µg/l)
		Sample Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
3831Q_233	Low Flow	8/1/2013	ND(2.0) U	3.1	0.0071	4.7	65. J	3.3	ND(2.0) U
4909C_293	Low Flow	1/7/2013	ND(2.0) U/J	ND(0.27) U	ND(0.005) U	14.	50.	ND(0.20) U	ND(2.0) U
4909C_293	Low Flow	7/12/2013	ND(2.0) U/J	0.35	ND(0.005) U	1.7	20.	ND(0.20) U	ND(2.0) U
4909FR_263	Low Flow	8/16/2013	0.46 J	2.5	ND(0.005) U	46.	64. J	1.0	2.2
4918A_297.5	Low Flow	12/20/2012	ND(2.0) U	16.	ND(0.005) U/J	ND(0.50) U	1.9	ND(0.20) U/J	ND(2.0) U
4919D_295	Low Flow	12/6/2012	ND(2.0) U/J	0.67	ND(0.005) U	0.55	15.	ND(0.20) U	ND(2.0) U/J
4919D_295	Low Flow	6/21/2013	ND(2.0) U/J	1.2	ND(0.005) U	1.1	4.0	0.14 J/J	ND(2.0) U
NH-C07-300_246	Low Flow	6/28/2013	ND(2.0) U/J	2.7	ND(0.005) U	ND(0.50) U	0.72	21.	ND(2.0) U
NH-C07-300_246-dup-2	Low Flow	6/28/2013	ND(2.0) U	2.7	0.0025 /J	ND(0.50) U	0.68	20.	ND(2.0) U
NH-C09-310_253	Low Flow	6/28/2013	ND(2.0) U	110. /DIL	ND(0.005) U	25.	23.	1.5	ND(2.0) U
NH-C10-280_223	Low Flow	6/25/2013	ND(2.0) U	1.1	ND(0.005) U	8.3	18.	20. J	ND(2.0) U
NH-C10-360_313	Low Flow	12/14/2012	ND(2.0) U	1.6	ND(0.005) U	3.3	3.2	1.4	ND(2.0) U
NH-C10-360_313	Low Flow	6/25/2013	ND(2.0) U/J	1.7	ND(0.005) U	1.0	1.7	1.1	ND(2.0) U
NH-C11-295_238	Low Flow	7/9/2013	4.4 J	2.9	ND(0.005) U	110. /DIL	120. /DIL	1.7	ND(2.0) U
NH-C12-360_313	Low Flow	12/26/2012	ND(2.0) U	1.2	ND(0.005) U	1.0	0.50 J/J	0.58	ND(2.0) U
NH-C12-360_313	Low Flow	6/24/2013	ND(2.0) U	1.0	ND(0.005) U	0.63	0.28 J/J	0.45	ND(2.0) U
NH-C13-385_338	Low Flow	12/12/2012	ND(2.0)	ND(0.14) U	ND(0.005) U	0.25 J/J	7.7	1.4	ND(2.0) U
NH-C13-385_338	Low Flow	7/11/2013	3.1 J	ND(0.33) U	ND(0.005) U	1.1	9.6	1.4	ND(2.0) U
NH-C14-250_202	Low Flow	6/28/2013	ND(2.0) U	ND(0.28) U	ND(0.005) U	27.	8.1	2.7	ND(2.0) U
NH-C14-250_203	Low Flow	12/26/2012	ND(2.0) U	ND(0.44) U	ND(0.005) U	16.	6.1	2.7	ND(2.0) U
NH-C15-330_273	Low Flow	7/16/2013	ND(2.0) U/J	0.57	ND(0.005) U	4.0	33.	3.4	ND(2.0) U
NH-C16-390_343	Low Flow	12/4/2012	ND(2.0) U	3.4	ND(0.005) U	1.5	19.	0.53	ND(2.0) U/J
NH-C16-390_343	Low Flow	7/8/2013	ND(2.0) U/J	4.3	ND(0.005) U	3.0	22.	0.49	ND(2.0) U
NH-C17-255_188	Low Flow	7/2/2013	ND(2.0) U	ND(0.37) U	ND(0.005) U	0.17 J/J	2.3	1.7	ND(2.0) U
NH-C17-255_188-dup-3	Low Flow	7/2/2013	ND(2.0) U	ND(0.37) U	ND(0.005) U	0.17 J/J	2.2	1.7	ND(2.0) U
NH-C17-339_281	Low Flow	1/2/2013	0.41 J/J	1.2	ND(0.005) U	1.7	0.91	0.68	ND(2.0) U/J
NH-C17-339_281	Low Flow	7/2/2013	ND(2.0) U	0.99	ND(0.005) U	1.0	8.7	1.9	ND(2.0) U
NH-C18-270_223	Low Flow	12/11/2012	ND(2.0) U	ND(0.24) U	ND(0.005) U	ND(0.50) U	0.59	2.1	ND(2.0) U/J
NH-C18-270_223	Low Flow	7/3/2013	ND(2.0) U	ND(0.20) U	ND(0.005) U	0.24 J/J	0.63	2.6	ND(2.0) U
NH-C18-270_223-dup-4	Low Flow	7/3/2013	ND(2.0) U	ND(0.19) U	ND(0.005) U	0.19 J/J	0.57	2.6	ND(2.0) U
NH-C18-365_308	Low Flow	12/7/2012	ND(2.0) U	1.6	ND(0.005) U	2.5	70.	8.1	2.9 J-
NH-C18-365_308	Low Flow	7/16/2013	ND(2.0) U/J	0.72	ND(0.005) U	0.50	64.	5.3	ND(2.0) U
NH-C19-290_233	Low Flow	12/21/2012	ND(2.0) U	ND(0.76) U	ND(0.005) U	2.0	60.	2.4	ND(2.0) U
NH-C19-290_233	PDB	1/11/2013	NT	NT	NT	2.1	78.	NT	NT
NH-C19-290_233 DUP-5	PDB	1/11/2013	NT	NT	NT	2.1	79.	NT	NT
NH-C19-290_233	Low Flow	6/27/2013	ND(2.0) U	0.35	ND(0.005) U	1.3	20.	2.3	ND(2.0) U
NH-C19-290_233	PDB	7/17/2013	NT	NT	NT	0.23 J/J	8.7	NT	NT
NH-C19-290_243	PDB	1/11/2013	NT	NT	NT	1.6	76.	NT	NT
NH-C19-290_243	PDB	7/17/2013	NT	NT	NT	0.25 J/J	9.3	NT	NT

TABLE 3

SUMMARY OF RECENT ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	Test Method	EPA 521	EPA 522	EPA 524M-TCP	EPA 524.2		EPA 218.6	EPA 314.0
		N-Analyte/ Units:	Nitrosodimethylamine (ng/L)	1,4-Dioxane (µg/L)	1,2,3-Trichloropropane (µg/L)	Tetrachloroethene (µg/L)	Trichloroethene (µg/L)	Chromium VI (µg/L)	Perchlorate (µg/l)
		Sample Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
NH-C19-290_243-dup-7	PDB	7/17/2013	NT	NT	NT	0.26 J/J	8.8	NT	NT
NH-C19-290_253	PDB	1/11/2013	NT	NT	NT	1.9	77. J	NT	NT
NH-C19-290_253	PDB	7/17/2013	NT	NT	NT	0.55	15.	NT	NT
NH-C19-290_263	PDB	1/11/2013	NT	NT	NT	1.7	77.	NT	NT
NH-C19-290_263	PDB	7/17/2013	NT	NT	NT	2.1	25.	NT	NT
NH-C19-290_273	PDB	1/11/2013	NT	NT	NT	2.1	79.	NT	NT
NH-C19-290_273	PDB	7/17/2013	NT	NT	NT	1.9	23.	NT	NT
NH-C19-290_283	PDB	1/11/2013	NT	NT	NT	2.0	82.	NT	NT
NH-C19-290_283	PDB	7/17/2013	NT	NT	NT	2.2	26.	NT	NT
NH-C19-360_303	Low Flow	12/21/2012	ND(2.0) U	1.8	ND(0.005) U	1.7	42.	1.5	ND(2.0) U
NH-C19-360_303	PDB	1/11/2013	NT	NT	NT	2.0	69. J	NT	NT
NH-C19-360_303	Low Flow	6/27/2013	ND(2.0) U	1.2	ND(0.005) U	1.3	40.	1.6	ND(2.0) U
NH-C19-360_303	PDB	7/17/2013	NT	NT	NT	1.8	46.	NT	NT
NH-C19-360_313	PDB	1/11/2013	NT	NT	NT	2.5	55.	NT	NT
NH-C19-360_313	PDB	7/17/2013	NT	NT	NT	2.6	67.	NT	NT
NH-C19-360_323	PDB	1/11/2013	NT	NT	NT	3.3	45.	NT	NT
NH-C19-360_323	PDB	7/17/2013	NT	NT	NT	3.2	49.	NT	NT
NH-C19-360_333	PDB	1/11/2013	NT	NT	NT	2.6	45.	NT	NT
NH-C19-360_333	PDB	7/17/2013	NT	NT	NT	3.0	48.	NT	NT
NH-C20-380_322	Low Flow	12/19/2012	ND(2.0) U/J	1.6	ND(0.005) U	1.3	46.	0.48	ND(2.0) U
NH-C20-380_322	Low Flow	7/10/2013	ND(2.0) UJ	1.4	ND(0.005) U	0.62	21.	0.78	ND(2.0) U
NH-C21-260_213	Low Flow	1/3/2013	ND(2.0) U	0.79	ND(0.005) U	0.76	23.	15.	ND(2.0) UJ
NH-C21-260_213_DUP-3	Low Flow	1/3/2013	ND(2.0) U/J	0.86	ND(0.005) U	0.70	24.	15.	ND(2.0) UJ
NH-C21-260_213	Low Flow	7/10/2013	0.73 J	ND(0.16) U	ND(0.005) U	2.4	40.	18.	ND(2.0) U
NH-C21-340_283	Low Flow	1/4/2013	ND(2.0) U	2.1	ND(0.005) U	0.51	15.	19.	ND(2.0) U
NH-C21-340_283	Low Flow	7/9/2013	ND(2.0) UJ	1.3	ND(0.005) U	1.2	95.	8.6	ND(2.0) U
NH-C23-310_253	Low Flow	12/28/2012	ND(2.0) U	2.7	ND(0.005) U	1.7	1.9	0.96	ND(2.0) UJ
NH-C23-310_253	PDB	1/11/2013	NT	NT	NT	1.2	1.7	NT	NT
NH-C23-310_253	Low Flow	7/1/2013	4.0	ND(0.36) U	ND(0.005) U	0.69	1.1	1.0	ND(2.0) U
NH-C23-310_253	PDB	7/17/2013	NT	NT	NT	0.25 J/J	1.3	NT	NT
NH-C23-310_263	PDB	1/11/2013	NT	NT	NT	2.1	2.4	NT	NT
NH-C23-310_263	PDB	7/17/2013	NT	NT	NT	0.25 J/J	1.8	NT	NT
NH-C23-310_273	PDB	1/11/2013	NT	NT	NT	2.4	2.2	NT	NT
NH-C23-310_273	PDB	7/17/2013	NT	NT	NT	0.36 J/J	2.1	NT	NT
NH-C23-310_283	PDB	1/11/2013	NT	NT	NT	2.5	2.2	NT	NT
NH-C23-310_283	PDB	7/17/2013	NT	NT	NT	0.37 J/J	2.0	NT	NT
NH-C23-310_293	PDB	1/11/2013	NT	NT	NT	2.4	2.5	NT	NT
NH-C23-310_293	PDB	7/17/2013	NT	NT	NT	0.75	3.2	NT	NT
NH-C23-310_303	PDB	1/11/2013	NT	NT	NT	2.3	2.0	NT	NT

TABLE 3

SUMMARY OF RECENT ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	Test Method	EPA 521	EPA 522	EPA 524M-TCP	EPA 524.2		EPA 218.6	EPA 314.0
		Analyte/ Units:	N-Nitrosodimethylamine (ng/L)	1,4-Dioxane (µg/L)	1,2,3-Trichloropropane (µg/L)	Tetrachloroethene (µg/L)	Trichloroethene (µg/L)	Chromium VI (µg/L)	Perchlorate (µg/l)
		Sample Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
NH-C23-310_303	PDB	7/17/2013	NT	NT	NT	0.87	3.5	NT	NT
NH-C24-305_247	Low Flow	12/18/2012	ND(2.0)	0.89	ND(0.005) U	1.6	0.24 J/J	0.80	ND(2.0) U
NH-C24-305_247	Low Flow	6/21/2013	2.2 J	0.41	ND(0.005) U	4.9	0.84	1.5	ND(2.0) U
NHE-1_240	Low Flow	12/11/2012	ND(2.0) U/J	3.2	ND(0.005) U	2.6	38.	0.20 J/J	ND(2.0) UJ
NHE-1_240	Low Flow	7/11/2013	ND(2.0) UJ	1.1	ND(0.005) U	4.8	71.	0.24	ND(2.0) U

Abbreviations

PDB = Passive diffusion bag

DIL = Sample analyzed at dilution

EPA = The United States Environmental Protection Agency

ng/L = Nanogram per liter

ND = Not Detected at the specific reporting level in parentheses

NT = Not Tested

µg/L = Microgram per liter

Validation Qualifiers

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias.

R = The sample results are rejected. The presence or absence of the analyte cannot be verified. Rejected results are not usable for any purpose.

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ = The analyte was analyzed for but was not detected above the reported value. The reported quantitation limit is approximate.

Laboratory Qualifiers

B = Compound is also detected in the laboratory method blank.

J = Result is detected below the reporting limit or is an estimated concentration.

TABLE 4

SUMMARY OF RECENT ANALYTICAL RESULTS - B-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	Test Method	EPA 521	EPA 522	EPA 524M-TCP	EPA 524.2		EPA 218.6	EPA 314.0
		Analyte/ Units:	N-Nitrosodimethylamine (ng/L)	1,4-Dioxane (µg/L)	1,2,3-Trichloropropane (µg/L)	Tetrachloroethene (µg/L)	Trichloroethene (µg/L)	Chromium VI (µg/L)	Perchlorate (µg/l)
			Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
4909C_392	Low Flow	1/7/2013	ND(2.0) U	ND(0.13) U	ND(0.005) U	0.18 J/J	2.7	0.41	ND(2.0) U
4909C_392	Low Flow	7/12/2013	ND(2.0) UJ	0.49	ND(0.005) U	0.23 J/J	10.	ND(0.20) U	ND(2.0) U
4909C_398	Low Flow	1/7/2013	ND(2.0) U	ND(0.14) U	ND(0.005) U	0.37 J/J	3.6	0.32	ND(2.0) U
4909C_398	Low Flow	7/12/2013	ND(2.0) UJ	0.49	ND(0.005) U	0.52	18.	0.37	ND(2.0) U
4918A_483	Low Flow	12/20/2012	ND(2.0) U	8.7	ND(0.005) U	ND(0.50) U	2.6	ND(0.20) UJ	ND(2.0) U
GW-18B_402	Low Flow	12/5/2012	ND(2.0) U	ND(0.38) U	ND(0.005) U	0.31 J/J	8.4	0.39	ND(2.0) UJ
GW-18B_402	Low Flow	6/19/2013	ND(2.0) U	0.63	ND(0.005) U	0.30 J/J	11.	0.34	ND(2.0) U
GW-18B_402-dup-1	Low Flow	6/19/2013	ND(2.0) U	0.43	ND(0.005) U	0.34 J/J	11.	0.33	ND(2.0) U
GW-18B_405	Low Flow	12/6/2012	ND(2.0) U	0.41	ND(0.005) U	0.25 J/J	7.3	0.40	ND(2.0) UJ
GW-18B_405_DUP-1	Low Flow	12/6/2012	ND(2.0) U	0.39	ND(0.005) U	0.29 J/J	7.4	0.41	ND(2.0) UJ
GW-18B_405	Low Flow	6/19/2013	ND(2.0) U	0.48	ND(0.005) U	0.29 J/J	11.	0.28	ND(2.0) U
GW-19B_401.5	Low Flow	12/13/2012	ND(2.0)	ND(0.082) U	ND(0.005) U	0.22 J/J	0.42 J/J	0.53	ND(2.0) U
GW-19B_401.5_DUP-2	Low Flow	12/13/2012	ND(2.0)	ND(0.07) U/J	ND(0.005) U	0.17 J/J	0.37 J/J	0.55	ND(2.0) U
GW-19B_401.5	Low Flow	6/24/2013	0.36 J/J	ND(0.26) U	ND(0.005) U	0.19 J/J	2.9	0.44	ND(2.0) U
GW-19B_405.5	Low Flow	12/13/2012	ND(2.0) U/J	ND(0.10) U	ND(0.005) U	0.18 J/J	0.39 J/J	0.55	ND(2.0) U
GW-19B_405.5	Low Flow	6/19/2013	ND(2.0) U	ND(0.29) U	ND(0.005) U	0.25 J/J	4.0	0.45	ND(2.0) U
LA1-CW05_339	Low Flow	12/10/2012	ND(2.0) U	1.8	0.0026 J/J	6.0	2.0	0.30	ND(2.0) UJ
LA1-CW05_339	Low Flow	7/15/2013	ND(2.0) UJ	2.0	ND(0.005) U	5.4	1.8	ND(0.20) U	ND(2.0) U
LA1-CW05_356	Low Flow	12/10/2012	ND(2.0) U	1.9 J	ND(0.005) U	19.	2.5	0.26	ND(2.0) UJ
LA1-CW05_356	Low Flow	7/15/2013	ND(2.0) UJ	1.9	ND(0.005) U	6.2	1.8	0.27	ND(2.0) U
LA1-CW05_356-dup-6	Low Flow	7/15/2013	ND(2.0) UJ	1.9	ND(0.005) U	6.2	1.9	0.24	ND(2.0) U
NH-C01-450_403	Low Flow	12/27/2012	ND(2.0) U	1.8	ND(0.005) U	0.63	2.2	ND(0.20) U	ND(2.0) U
NH-C01-450_403	Low Flow	7/26/2013	ND(2.0) UJ	2.2	ND(0.005) U	0.98	2.8	0.24	ND(2.0) U
NH-C01-450_447	Low Flow	12/27/2012	ND(2.0) U	1.9	ND(0.005) U	ND(0.50) U	0.56	ND(0.20) U	ND(2.0) U
NH-C01-450_447	Low Flow	7/26/2013	ND(2.0) UJ	2.0	ND(0.005) U	0.30 J/J	2.2	ND(0.20) U	ND(2.0) U
NH-C05-460_425	Low Flow	7/26/2013	1.0 J	0.05 J/J	ND(0.005) U	ND(0.50) U	4.0	0.12 J/J	ND(2.0) U
NH-C10-360_340	Low Flow	12/14/2012	ND(2.0) U	1.5	ND(0.005) U	2.2	3.4	1.4	ND(2.0) U
NH-C10-360_340	Low Flow	6/25/2013	ND(2.0) U	1.6	ND(0.005) U	3.2	4.4	1.5 J	ND(2.0) U
NH-C12-360_343	Low Flow	12/26/2012	ND(2.0) U	0.86	ND(0.005) U	0.98	0.47 J/J	0.51 J-/BU	ND(2.0) U
NH-C12-360_343	Low Flow	6/24/2013	ND(2.0) U	0.92	ND(0.005) U	1.5	0.39 J/J	0.28	ND(2.0) U
NH-C13-385_363	Low Flow	12/12/2012	ND(2.0)	ND(0.16) U	ND(0.005) U	0.15 J/J	7.3	1.5	ND(2.0) U
NH-C13-385_363	Low Flow	7/11/2013	ND(2.0) UJ	ND(0.23) U	ND(0.005) U	0.26 J/J	5.5	1.3	ND(2.0) U
NH-C15-330_293	Low Flow	7/16/2013	ND(2.0) UJ	ND(0.28) U	ND(0.005) U	0.98	10.	2.6	ND(2.0) U
NH-C15-330_327	Low Flow	7/17/2013	ND(2.0) UJ	ND(0.35) U	ND(0.005) U	0.92	9.3	2.4	ND(2.0) U
NH-C16-390_375	Low Flow	12/4/2012	ND(2.0) U	1.3	ND(0.005) U	2.0	24.	0.43	ND(2.0) UJ
NH-C16-390_375	Low Flow	7/8/2013	ND(2.0) UJ	1.3	ND(0.005) U	1.5	25.	0.47	ND(2.0) U
NH-C16-390_375-dup-5	Low Flow	7/8/2013	ND(2.0) UJ	1.3	ND(0.005) U	1.4	24.	0.41	ND(2.0) U
NH-C17-339_313	Low Flow	1/2/2013	ND(2.0) U	1.2	ND(0.005) U	1.5	0.79	0.72	ND(2.0) UJ
NH-C17-339_313	Low Flow	7/2/2013	0.33 J/J	0.82	ND(0.005) U	1.3	4.3	1.3	ND(2.0) U

TABLE 4

SUMMARY OF RECENT ANALYTICAL RESULTS - B-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	Test Method	EPA 521	EPA 522	EPA 524M-TCP	EPA 524.2		EPA 218.6	EPA 314.0
		Analyte/ Units:	N-Nitrosodimethylamine (ng/L)	1,4-Dioxane (µg/L)	1,2,3-Trichloropropane (µg/L)	Tetrachloroethene (µg/L)	Trichloroethene (µg/L)	Chromium VI (µg/L)	Perchlorate (µg/l)
		Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
NH-C18-365_348	Low Flow	12/7/2012	ND(2.0) U	3.3 J	ND(0.005) U	2.8	38.	6.8	ND(2.0) UJ
NH-C18-365_348	Low Flow	7/15/2013	5.6 J	1.5	ND(0.005) U	1.1	71. J	11.	ND(2.0) U
NH-C19-360_343	PDB	1/11/2013	NT	NT	NT	2.3	45.	NT	NT
NH-C19-360_343 DUP-6	PDB	1/11/2013	NT	NT	NT	2.5	46.	NT	NT
NH-C19-360_343	PDB	7/17/2013	NT	NT	NT	2.6	46.	NT	NT
NH-C19-360_349	Low Flow	12/21/2012	ND(2.0) U	2.3	ND(0.005) U	2.1	38.	1.4	ND(2.0) U
NH-C19-360_349	Low Flow	6/27/2013	ND(2.0) U	2.3	ND(0.005) U	0.71	26.	1.2	ND(2.0) U
NH-C19-360_353	PDB	1/11/2013	NT	NT	NT	2.2	44.	NT	NT
NH-C19-360_353	PDB	7/17/2013	NT	NT	NT	2.6	47.	NT	NT
NH-C20-380_361	Low Flow	12/19/2012	ND(2.0) U	1.3	ND(0.005) U	1.1	71.	0.43	ND(2.0) U
NH-C20-380_361	Low Flow	7/10/2013	ND(2.0) UJ	1.3	ND(0.005) U	1.6	48. J	0.45	ND(2.0) U
NH-C21-340_325	Low Flow	1/4/2013	ND(2.0) U	2.0	ND(0.005) UJ	1.7	18.	21.	ND(2.0) U
NH-C21-340_325 DUP-4	Low Flow	1/4/2013	ND(2.0) U	2.1	ND(0.005) U	1.6	16.	21.	ND(2.0) U
NH-C21-340_325	Low Flow	7/9/2013	ND(2.0) UJ	1.9	ND(0.005) U	1.2	65. J	18.	ND(2.0) U
NH-C23-400_343	Low Flow	12/28/2012	ND(2.0) U	2.2	ND(0.005) U	2.0	58.	0.42	ND(2.0) UJ
NH-C23-400_343	PDB	1/11/2013	NT	NT	NT	0.32 J/J	26.	NT	NT
NH-C23-400_343	Low Flow	7/1/2013	ND(2.0) U	1.6	ND(0.005) U	1.6	48.	0.29	ND(2.0) U
NH-C23-400_343	PDB	7/17/2013	NT	NT	NT	ND(0.50) U	0.13 J/J	NT	NT
NH-C23-400_353	PDB	1/11/2013	NT	NT	NT	2.5	80.	NT	NT
NH-C23-400_353	PDB	7/17/2013	NT	NT	NT	ND(0.50) U	0.18 J/J	NT	NT
NH-C23-400_363	PDB	1/11/2013	NT	NT	NT	2.5	80.	NT	NT
NH-C23-400_363	PDB	7/17/2013	NT	NT	NT	ND(0.50) U	0.16 J/J	NT	NT
NH-C23-400_373	PDB	1/11/2013	NT	NT	NT	2.2	81.	NT	NT
NH-C23-400_373	PDB	7/17/2013	NT	NT	NT	ND(0.50) U	0.19 J/J	NT	NT
NH-C23-400_383	PDB	1/11/2013	NT	NT	NT	2.0	77. J	NT	NT
NH-C23-400_383	PDB	7/17/2013	NT	NT	NT	ND(0.50) U	0.53	NT	NT
NH-C23-400_393	PDB	1/11/2013	NT	NT	NT	1.8	73.	NT	NT
NH-C23-400_393	PDB	7/17/2013	NT	NT	NT	ND(0.50) U	0.80	NT	NT
NH-C23-400_393-dup-8	PDB	7/17/2013	NT	NT	NT	ND(0.50) U	0.73	NT	NT
NH-C23-400_397	Low Flow	12/28/2012	ND(2.0) U	1.4	ND(0.005) U	0.89	45.	0.45	ND(2.0) UJ
NH-C23-400_397	Low Flow	7/1/2013	0.48 J/J	1.6	ND(0.005) U	1.2	48.	0.37	ND(2.0) U

TABLE 4

SUMMARY OF RECENT ANALYTICAL RESULTS - B-ZONE
Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
Los Angeles County, California

Abbreviations

PDB = Passive diffusion bag
EPA = The United States Environmental Protection Agency
ng/L = Nanogram per liter
ND = Not Detected at the specific
NT = Not Tested
µg/L = Microgram per liter

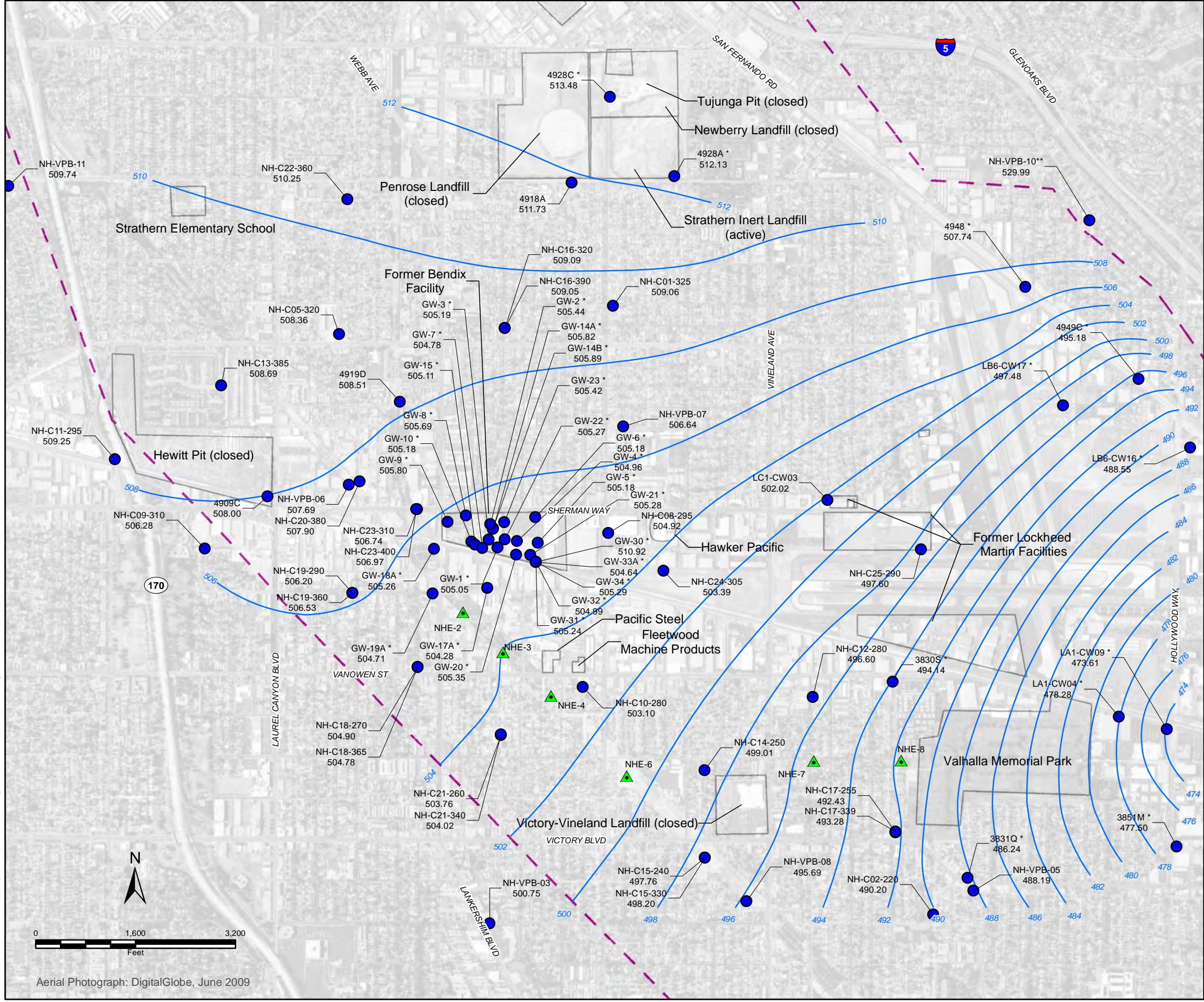
Validation Qualifiers

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ = The analyte was analyzed for but was not detected above the reported value. The reported quantitation limit is approximate.
R The sample results are rejected. The presence or absence of the analyte cannot be verified. Rejected results are not usable for any purpose.

Laboratory Qualifiers

B = Compound is also detected in the laboratory method blank.
J = Result is detected below the reporting limit or is an estimated concentration.

FIGURES



EXPLANATION

- Well with Groundwater Elevation
- Groundwater Elevation Contour (Feet NAVD88)
- Approximate Boundary
- San Fernando Valley Investigation Area 1

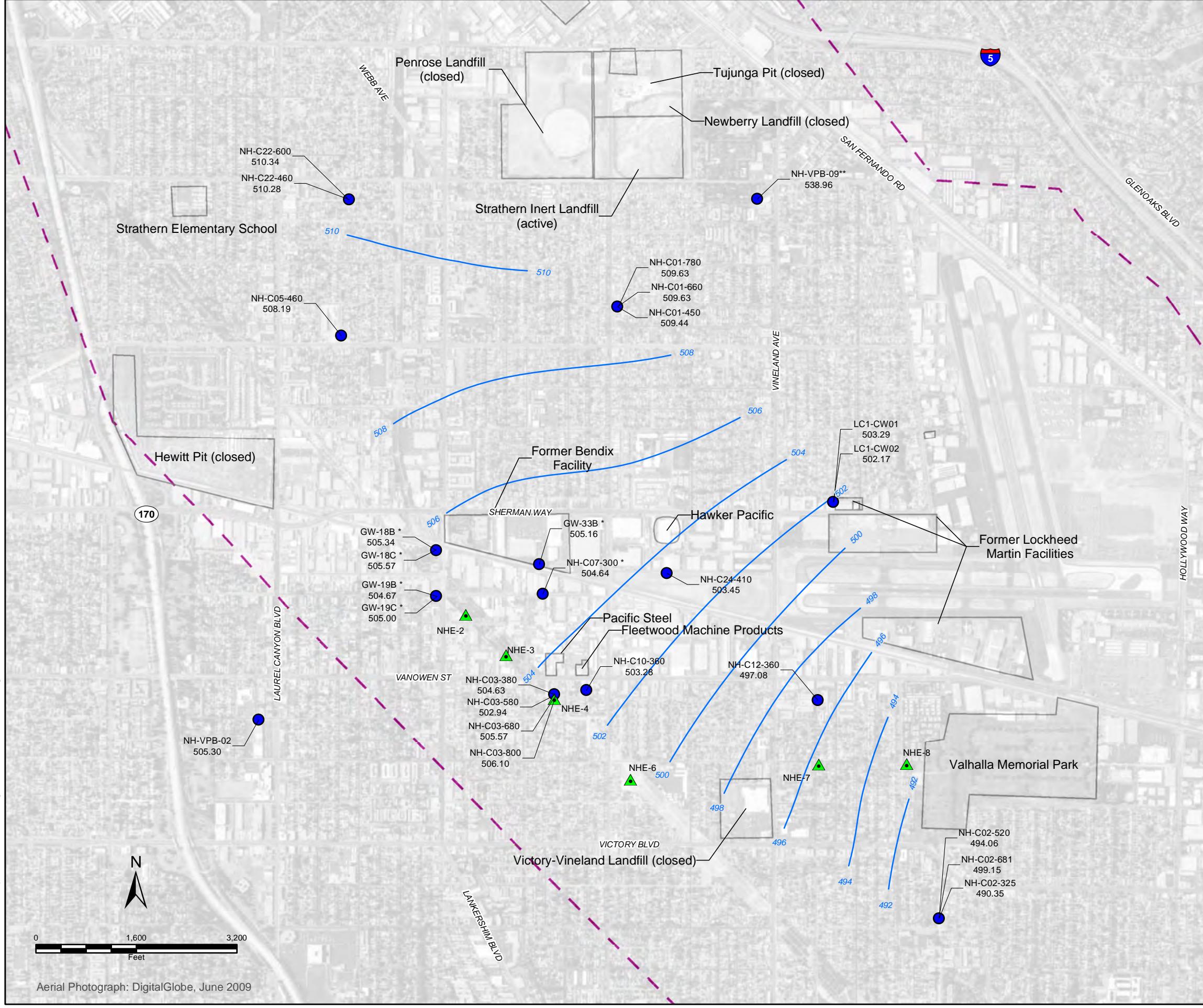
NOTE:

- Groundwater elevation measurements collected by other consultants in October 2012 indicated with an asterisk (*).
- Groundwater elevation measurements not used for contouring indicated with a double asterisk (**).

DECEMBER 2012 POTENTIOMETRIC MAP
 A-ZONE GROUNDWATER
 North Hollywood Operable Unit
 Los Angeles County, California

By: MDT Date: 12/2013 Project No. 4088115718

amec Figure 1a



EXPLANATION

- Well with Groundwater Elevation
- Groundwater Elevation Contour (Feet NAVD88)
- Approximate Boundary San Fernando Valley Investigation Area 1

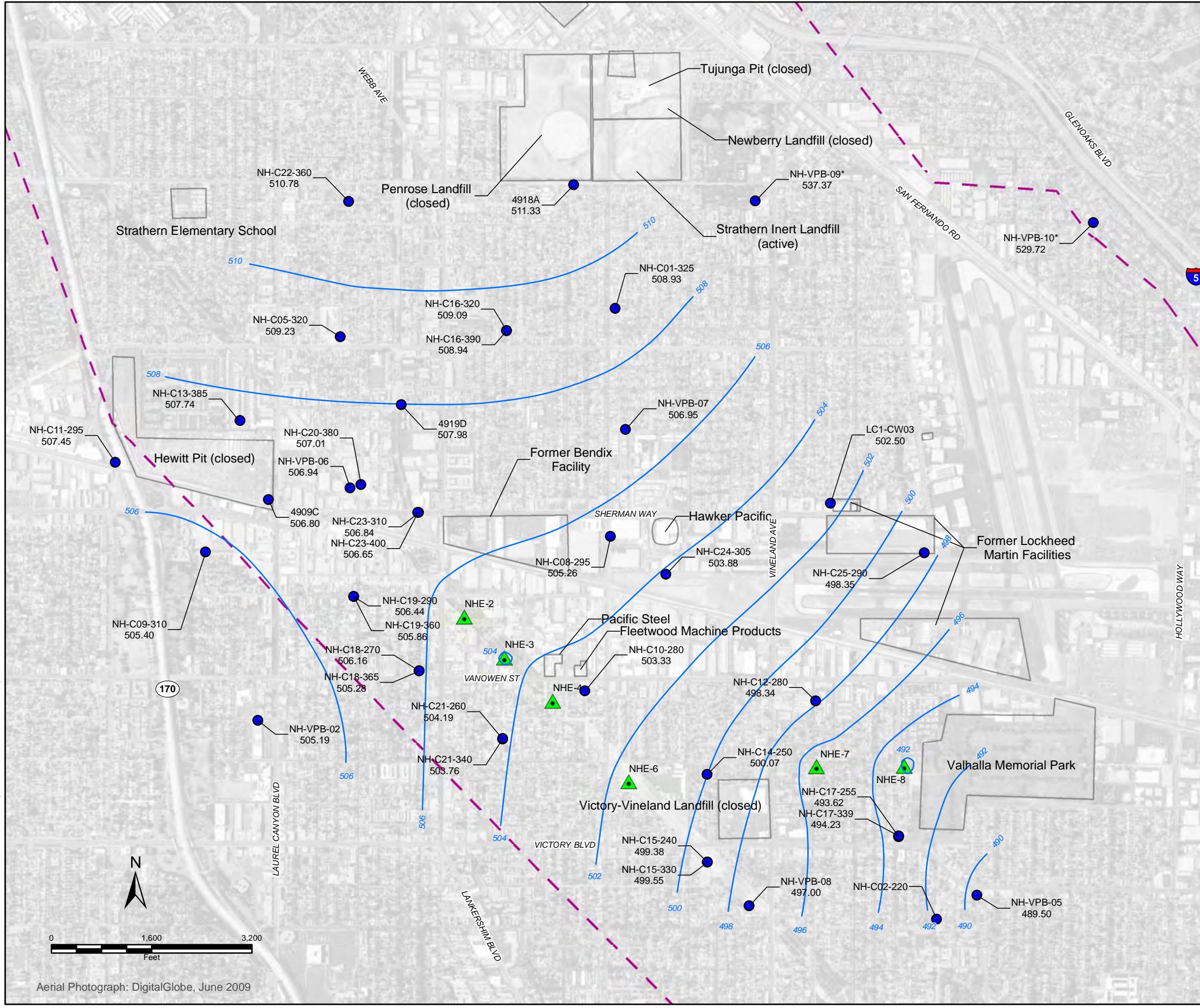
DECEMBER 2012 POTENTIOMETRIC MAP
 B-ZONE GROUNDWATER
 North Hollywood Operable Unit
 Los Angeles County, California

By: MDT Date: 12/2013 Project No. 4088115718



Figure

1b



EXPLANATION

- Well with Groundwater Elevation
- Groundwater Elevation Contour (Feet NAVD88)
- Approximate Boundary San Fernando Valley Investigation Area 1

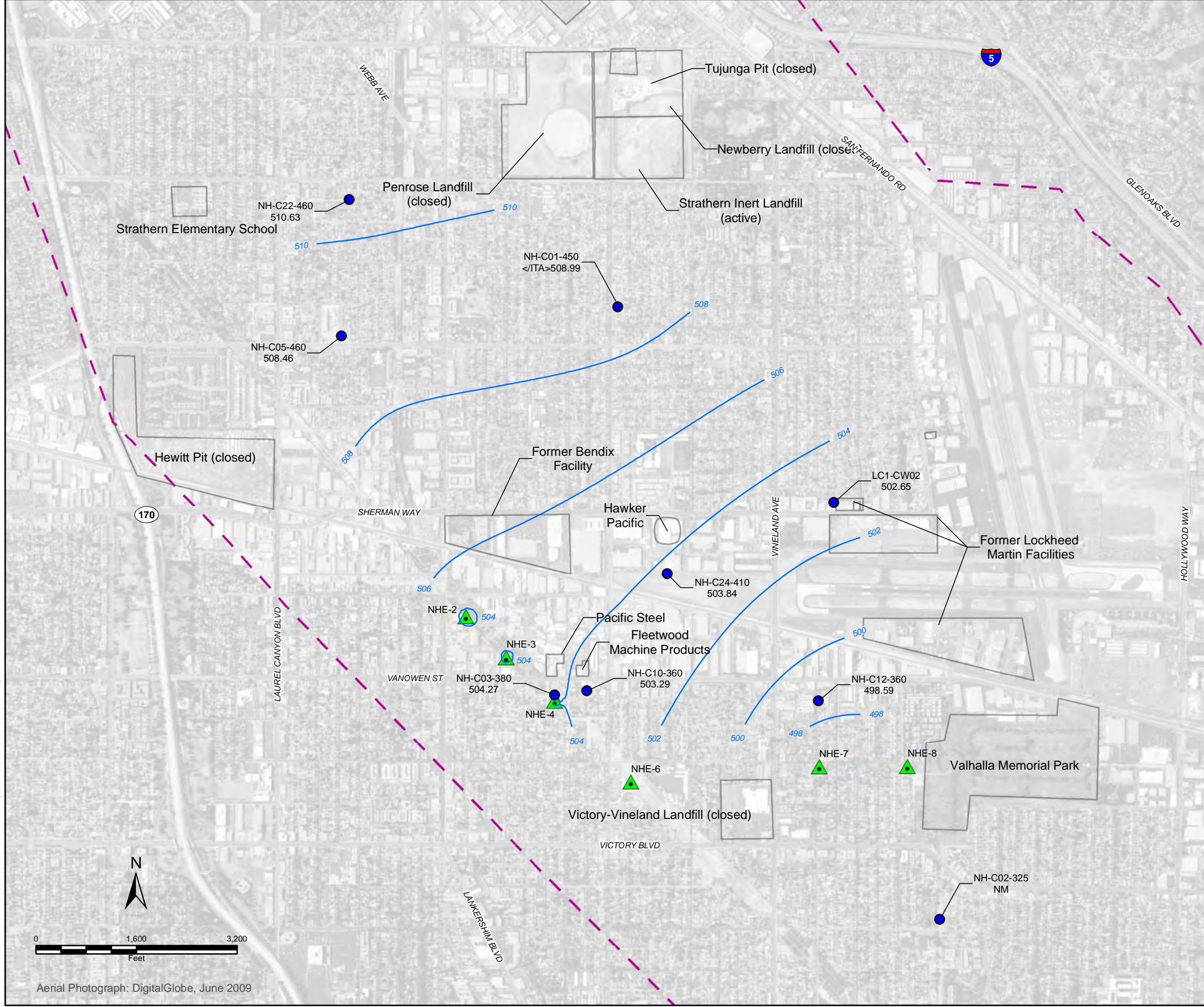
NOTE:

- Groundwater elevation not used for contouring indicated with *.

MARCH 2013 POTENIOMETRIC MAP
A-ZONE GROUNDWATER

North Hollywood Operable Unit
Los Angeles County, California

By: MDT	Date: 12/2013	Project No. 4088115718
amec		Figure 2a



EXPLANATION

- Well with Groundwater Elevation
- Groundwater Elevation Contour (Feet NAVD88)
- Approximate Boundary San Fernando Valley Investigation Area 1

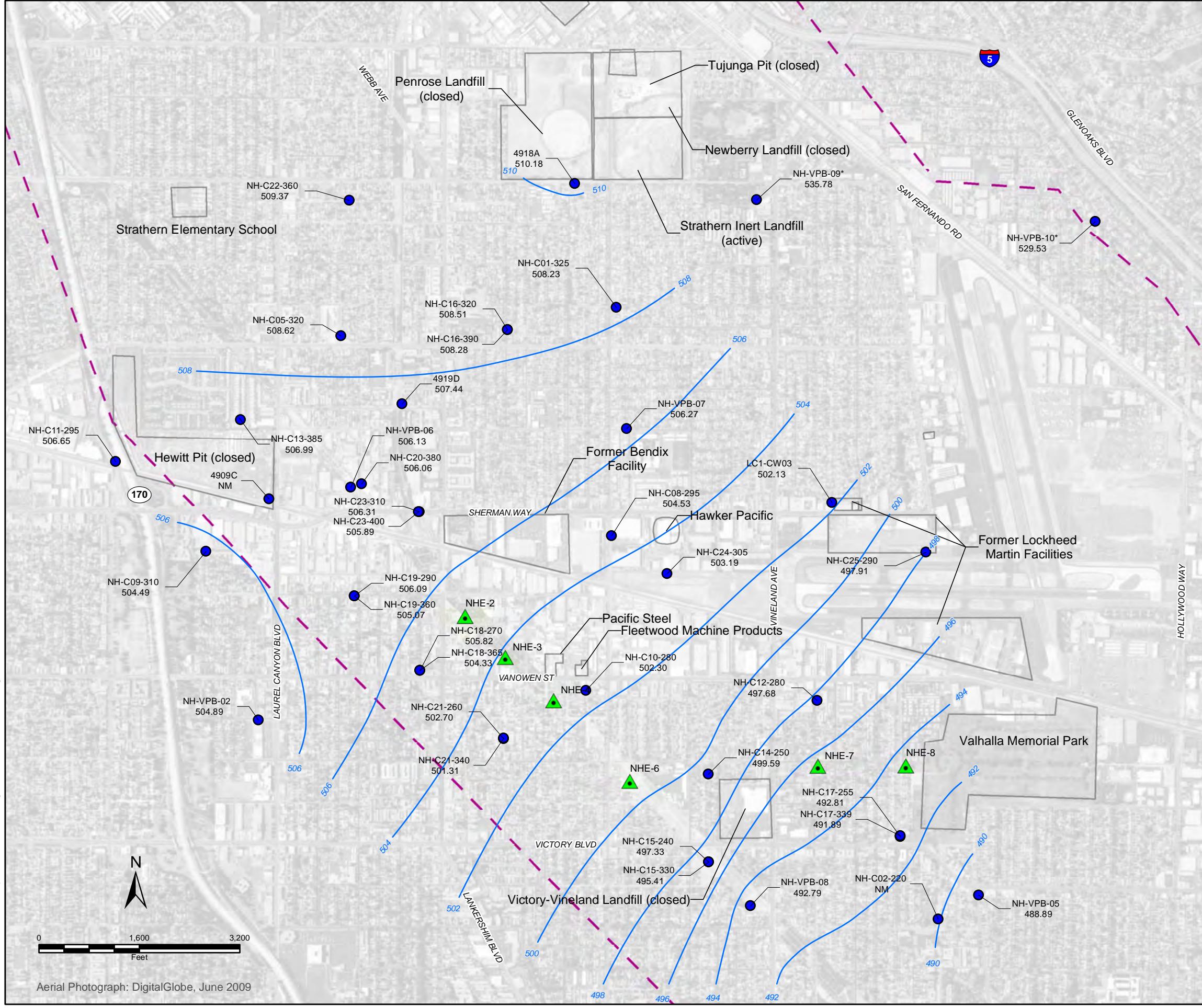
MARCH 2013 POTENTIOMETRIC MAP
B-ZONE GROUNDWATER
North Hollywood Operable Unit
Los Angeles County, California

By: MDT Date: 12/2013 Project No. 4088115718



Figure

2b



EXPLANATION

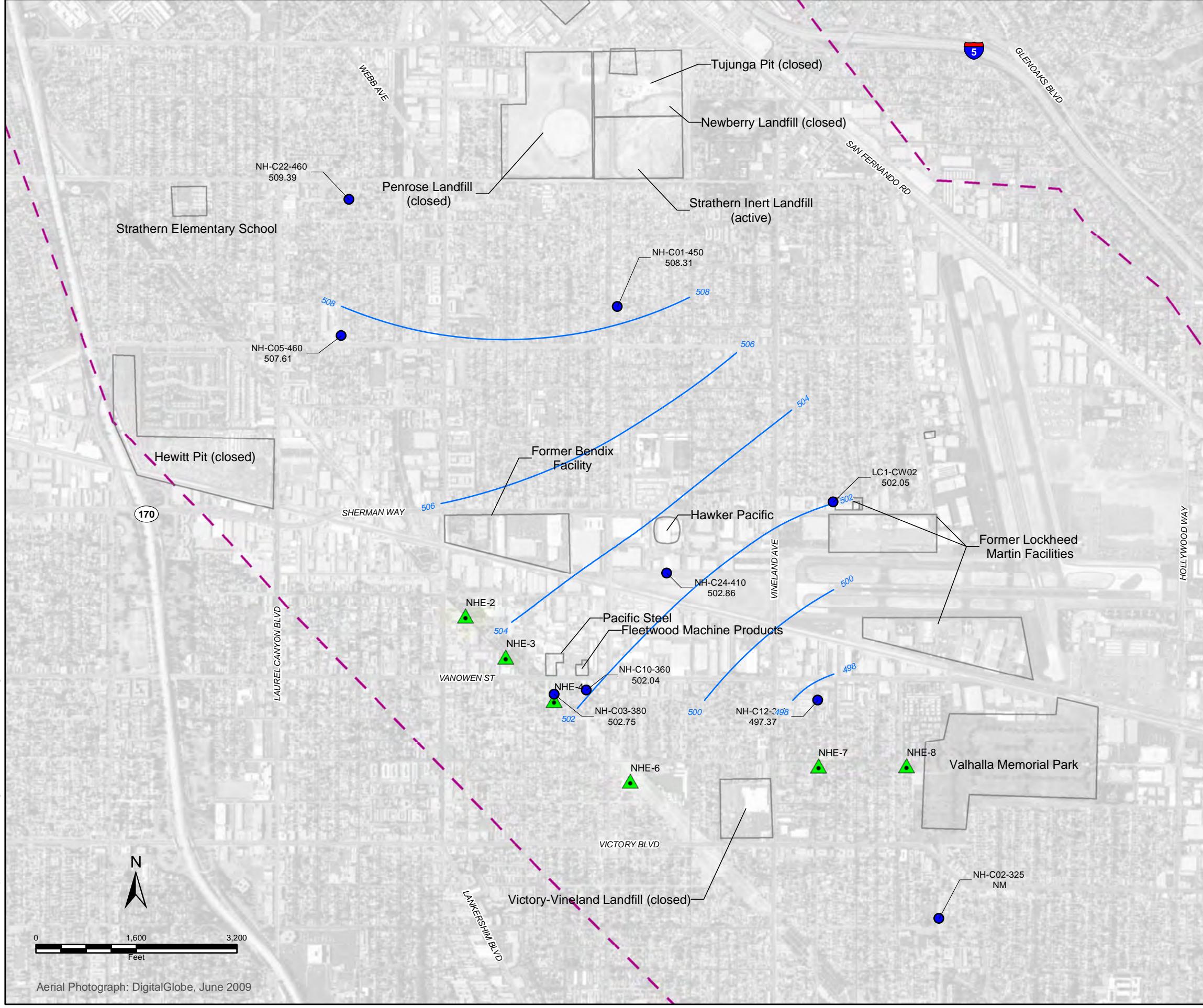
- Well with Groundwater Elevation
- Groundwater Elevation Contour (Feet NAVD88)
- Approximate Boundary
- - - San Fernando Valley Investigation Area 1

NOTE:

- Groundwater elevation not used for contouring indicated with *.

JUNE/JULY 2013 POTENTIOMETRIC MAP
 A-ZONE GROUNDWATER
 North Hollywood Operable Unit
 Los Angeles County, California

By: MDT	Date: 12/2013	Project No. 4088115718
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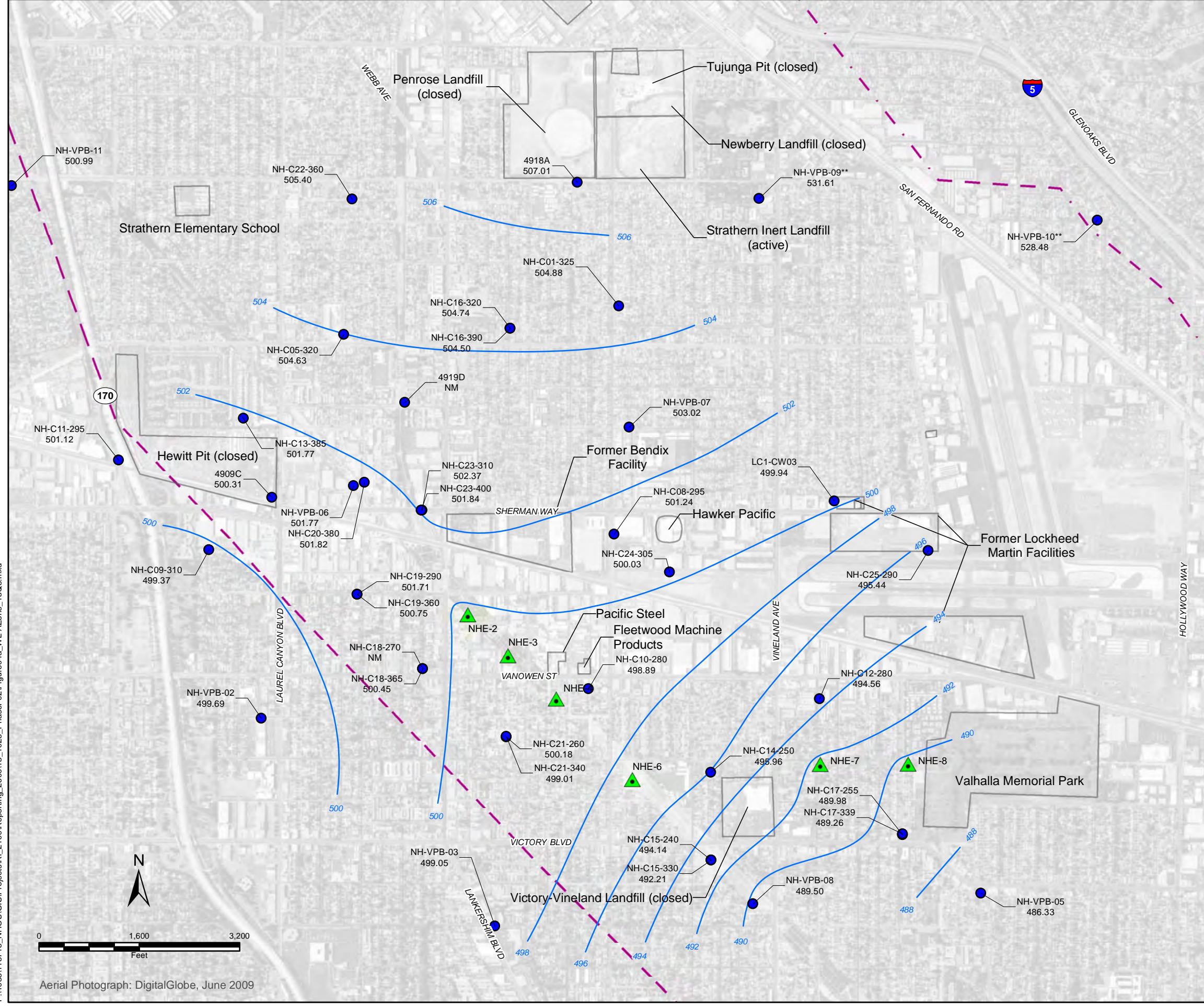


EXPLANATION

- Well with Groundwater Elevation
- Groundwater Elevation Contour (Feet NAVD88)
- Approximate Boundary San Fernando Valley Investigation Area 1

JUNE/JULY 2013 POTENTIOMETRIC MAP
B-ZONE GROUNDWATER
North Hollywood Operable Unit
Los Angeles County, California

By: MDT Date: 12/2013 Project No. 4088115718



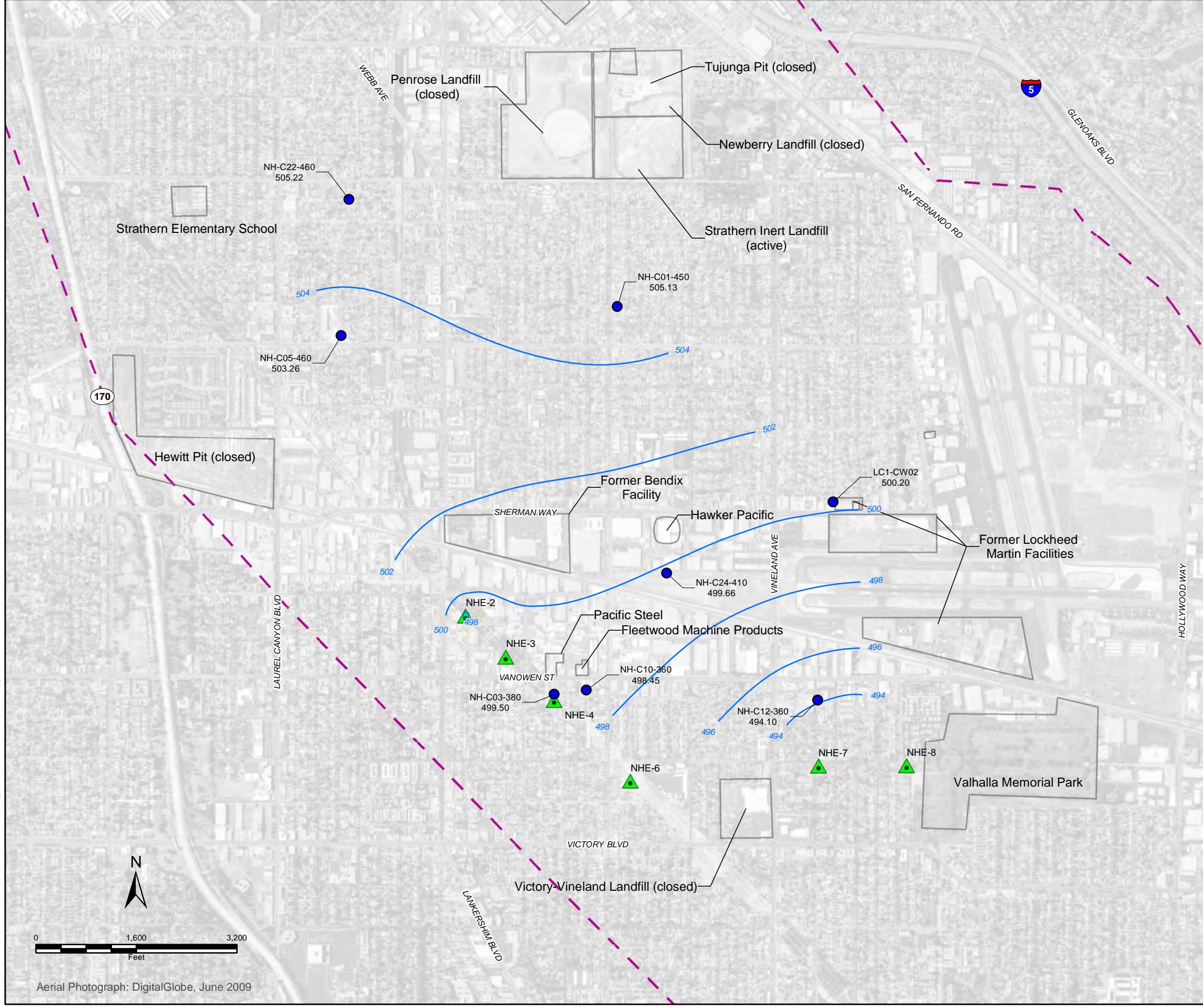
EXPLANATION

- Well with Groundwater Elevation
- Groundwater Elevation Contour (Feet NAVD88)
- Approximate Boundary
- San Fernando Valley Investigation Area 1

SEPTEMBER 2013 POTENSIOMETRIC MAP
A-ZONE GROUNDWATER
North Hollywood Operable Unit
Los Angeles County, California

By: MDT Date: 12/2013 Project No. 4088115718

amec Figure 4a



EXPLANATION

- Well with Groundwater Elevation
- Groundwater Elevation Contour (Feet NAVD88)
- Approximate Boundary San Fernando Valley Investigation Area 1

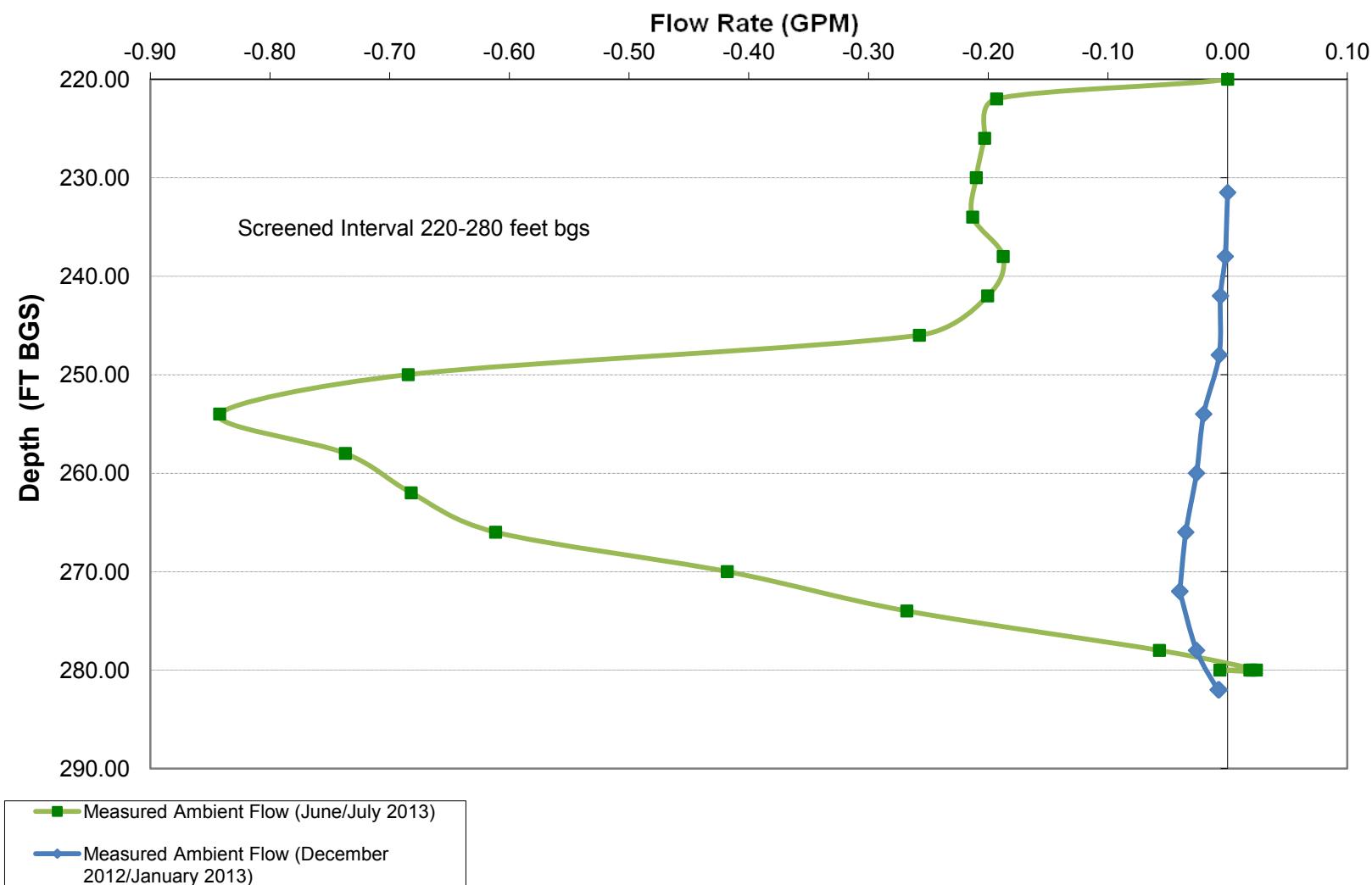
SEPTEMBER 2013 POTENSIOMETRIC MAP
B-ZONE GROUNDWATER
North Hollywood Operable Unit
Los Angeles County, California

By: MDT Date: 12/2013 Project No. 4088115718



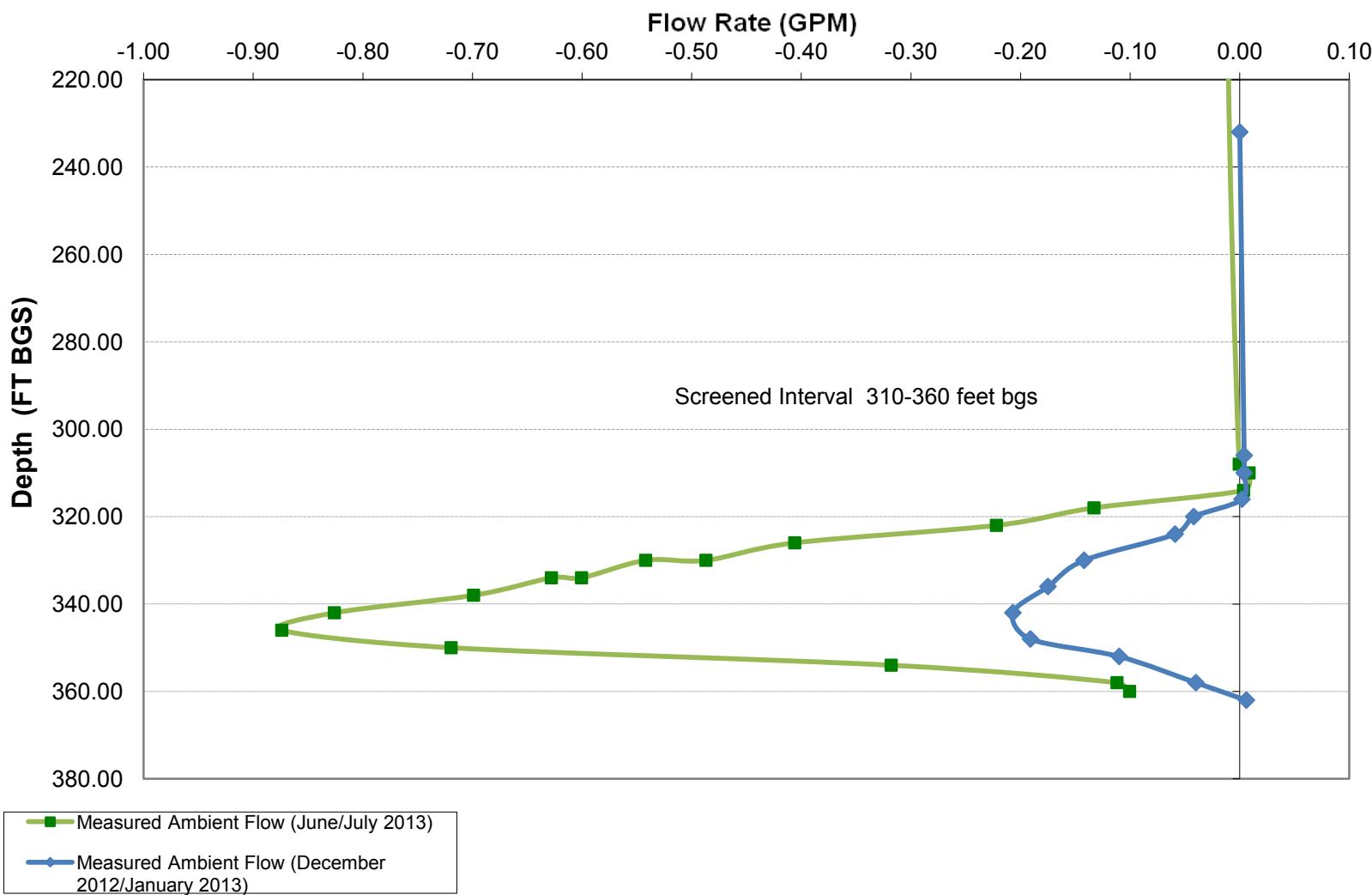
Figure

4b



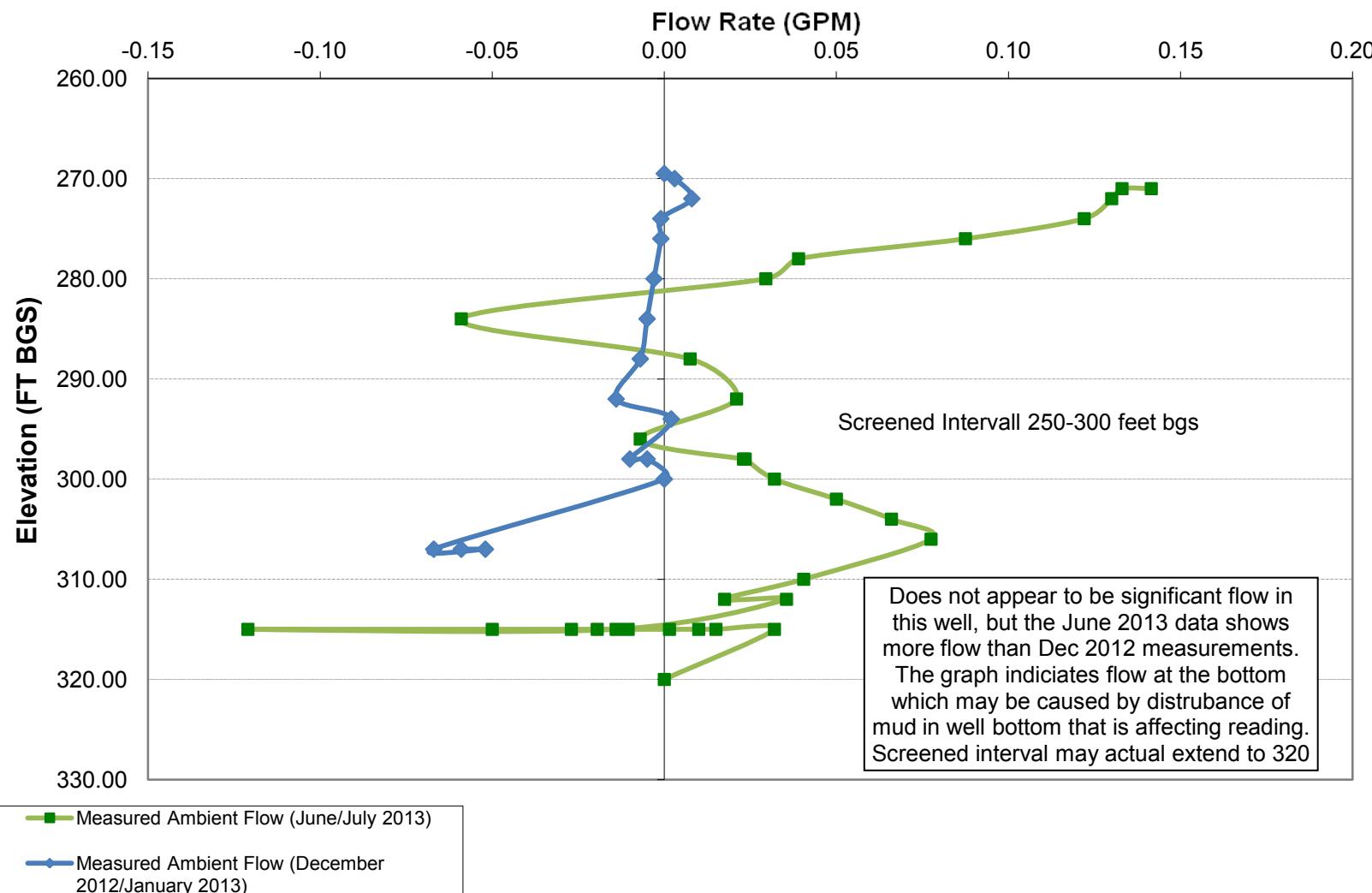
NH-C10-280 Vertical Flow Profile
Phase 1 Pre-Design Investigation,
NHOU Second Interim Remedy
Los Angeles County, California

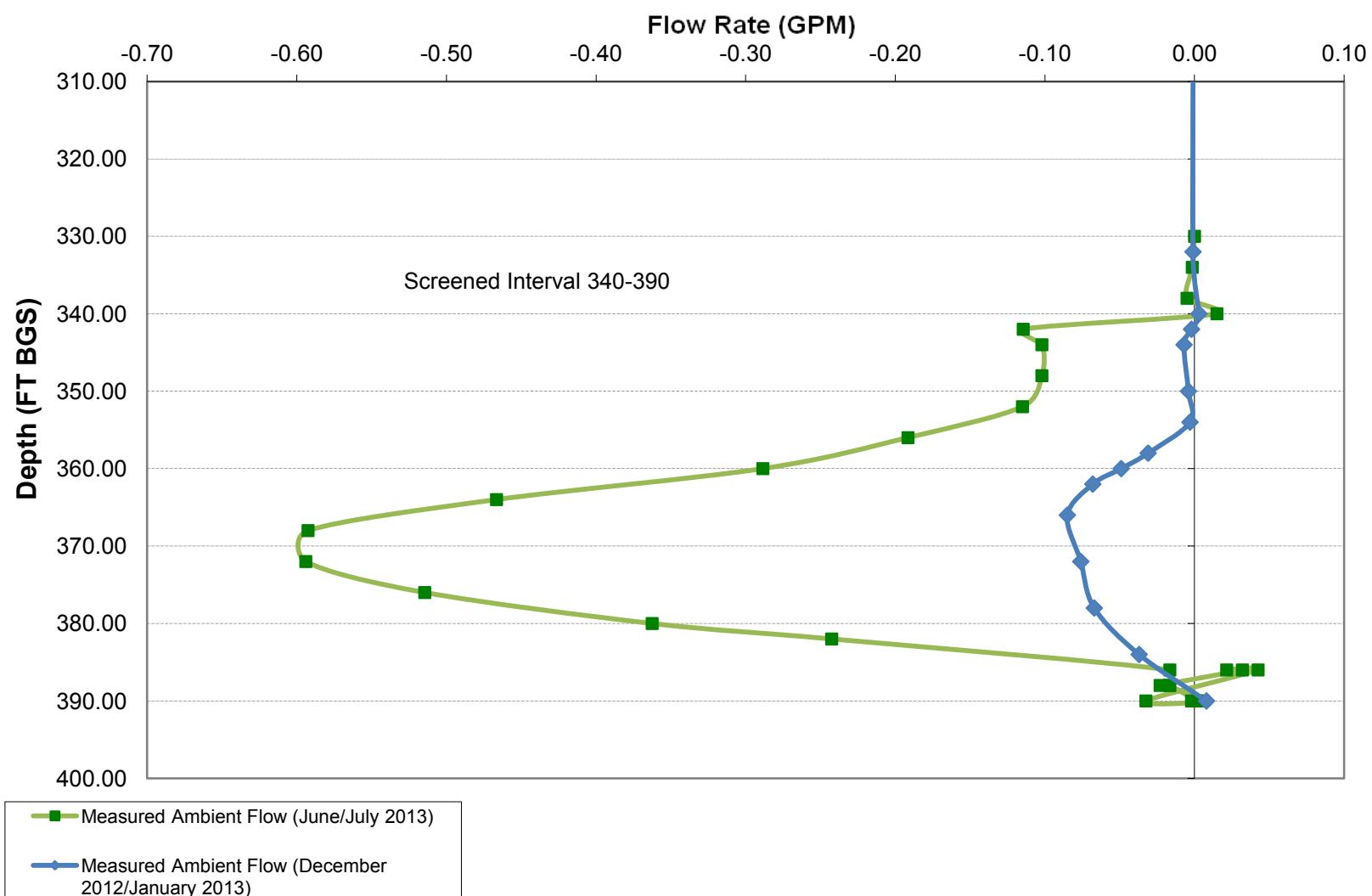
Figure:
5



NH-C10-360 Vertical Flow Profile
Phase 1 Pre-Design Investigation,
NHOU Second Interim Remedy
Los Angeles County, California

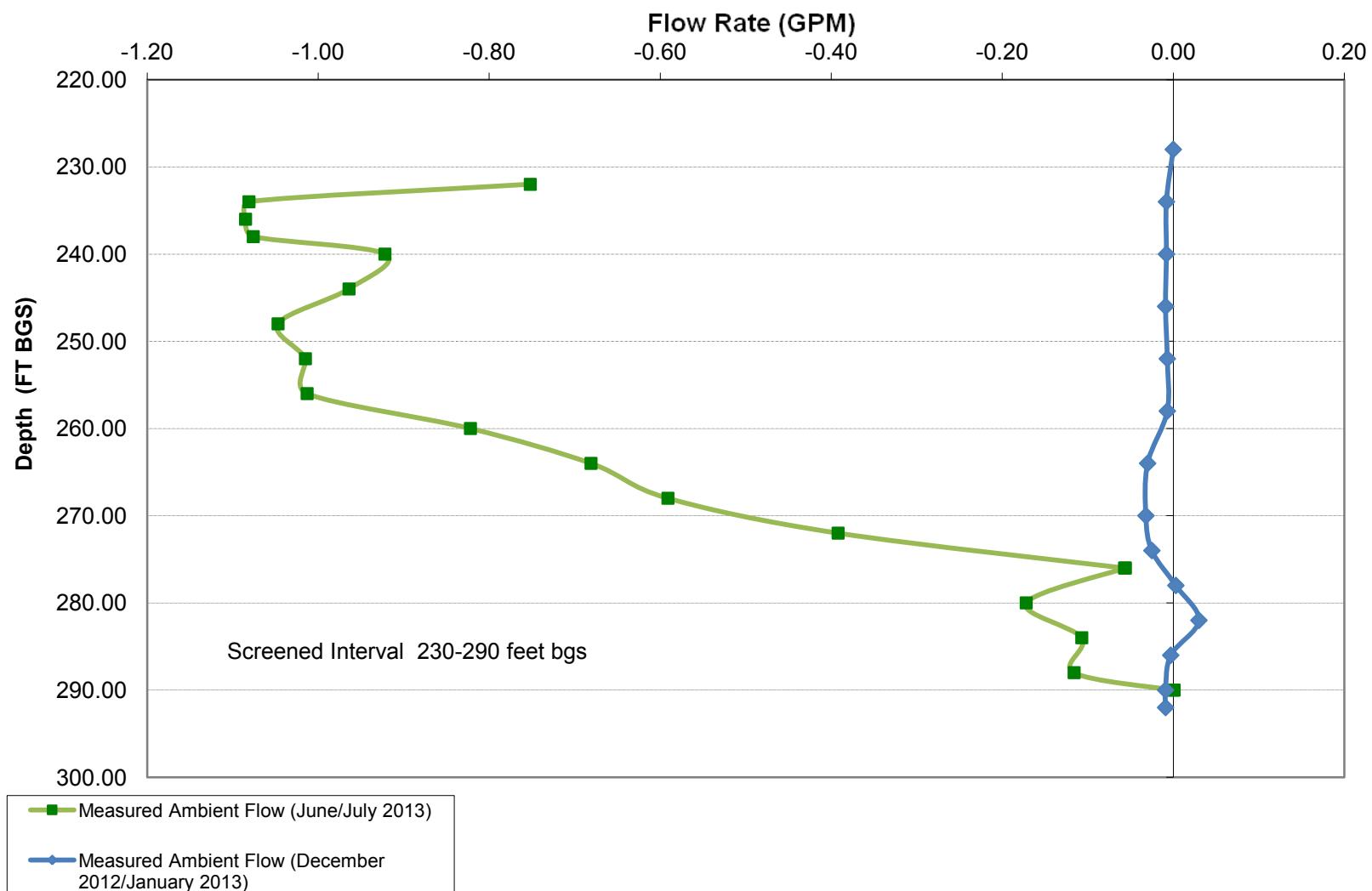
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6





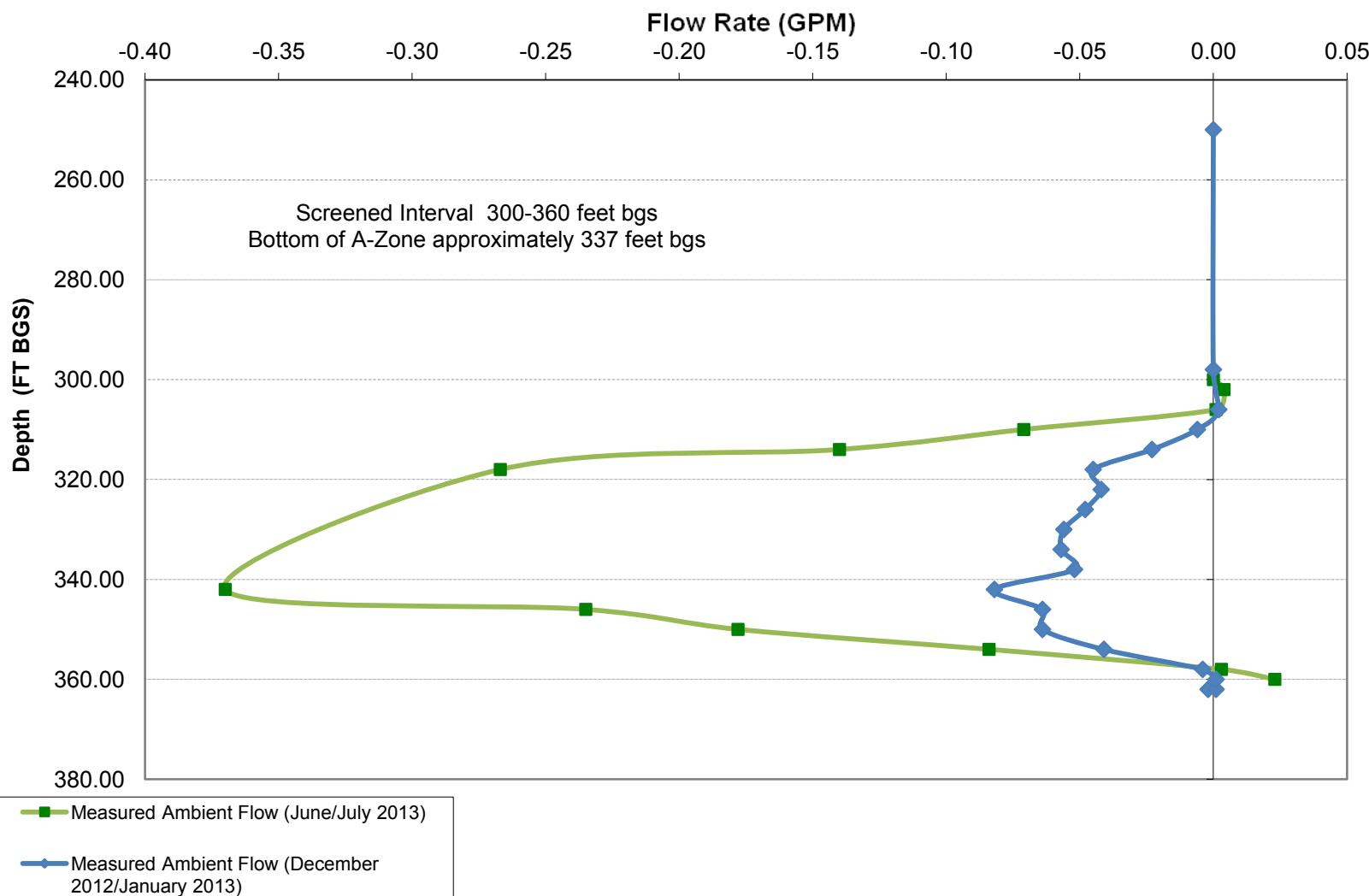
NH-C16-390 Vertical Flow Profile
Phase 1 Pre-Design Investigation,
NHOU Second Interim Remedy
Los Angeles County, California

Figure:
8



NH-C19-290 Vertical Flow Profile
Phase 1 Pre-Design Investigation,
NHOU Second Interim Remedy
Los Angeles County, California

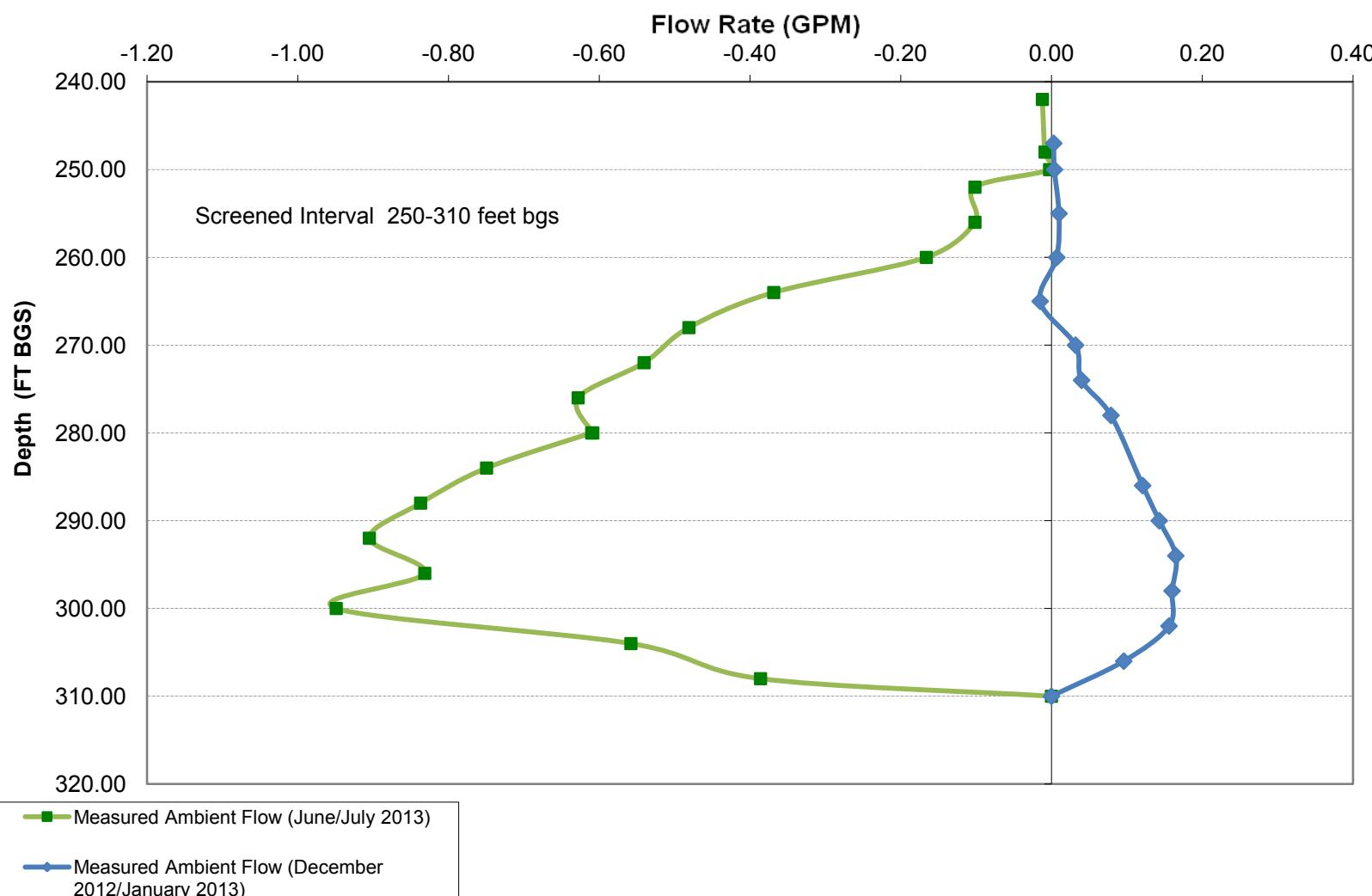
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9



NH-C19-360 Vertical Flow Profile
Phase 1 Pre-Design Investigation,
NHOU Second Interim Remedy
Los Angeles County, California

Figure:

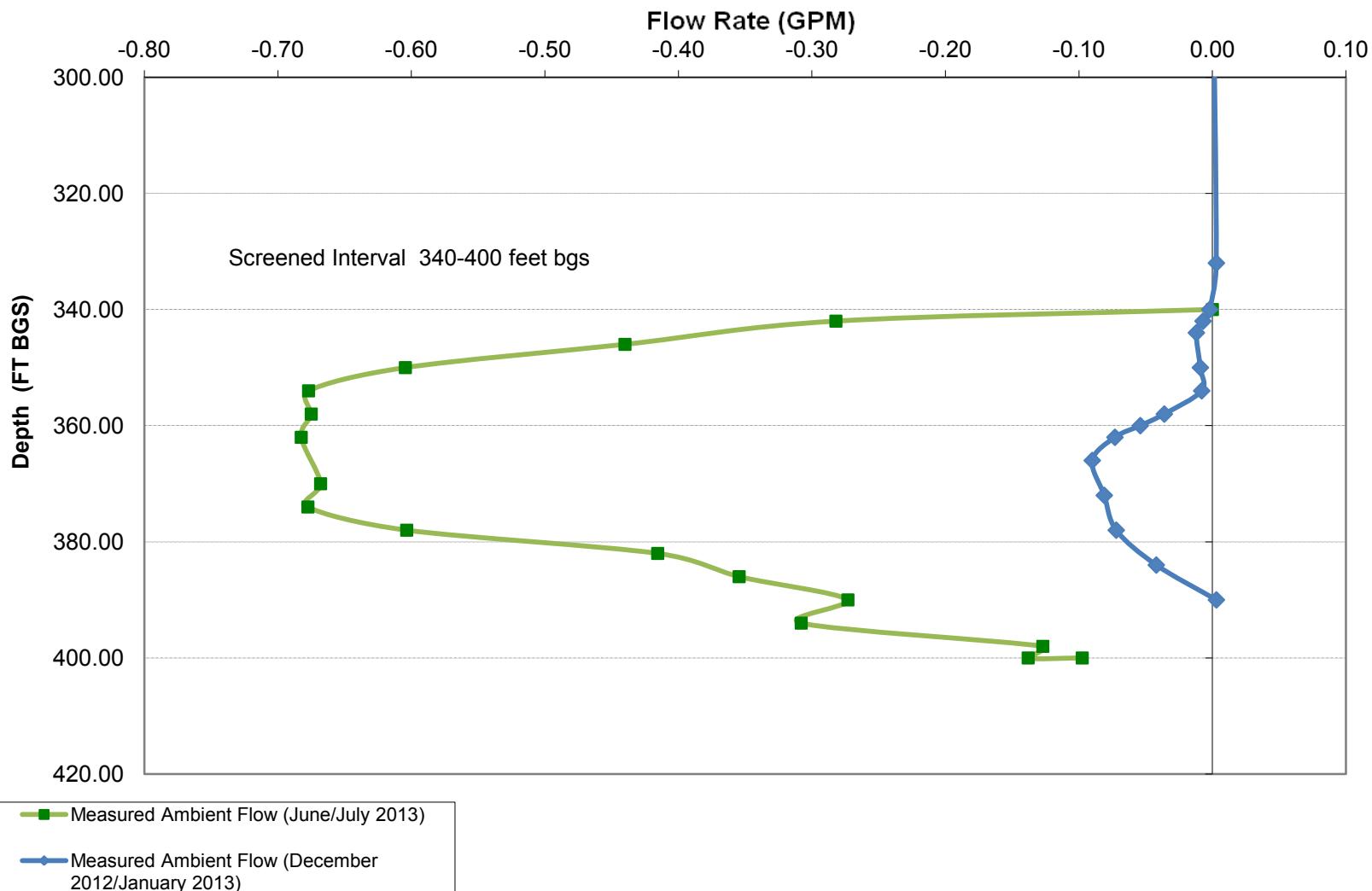
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NH-C23-310 Vertical Flow Profile
Phase 1 Pre-Design Investigation,
NHOU Second Interim Remedy
Los Angeles County, California

Figure:

11



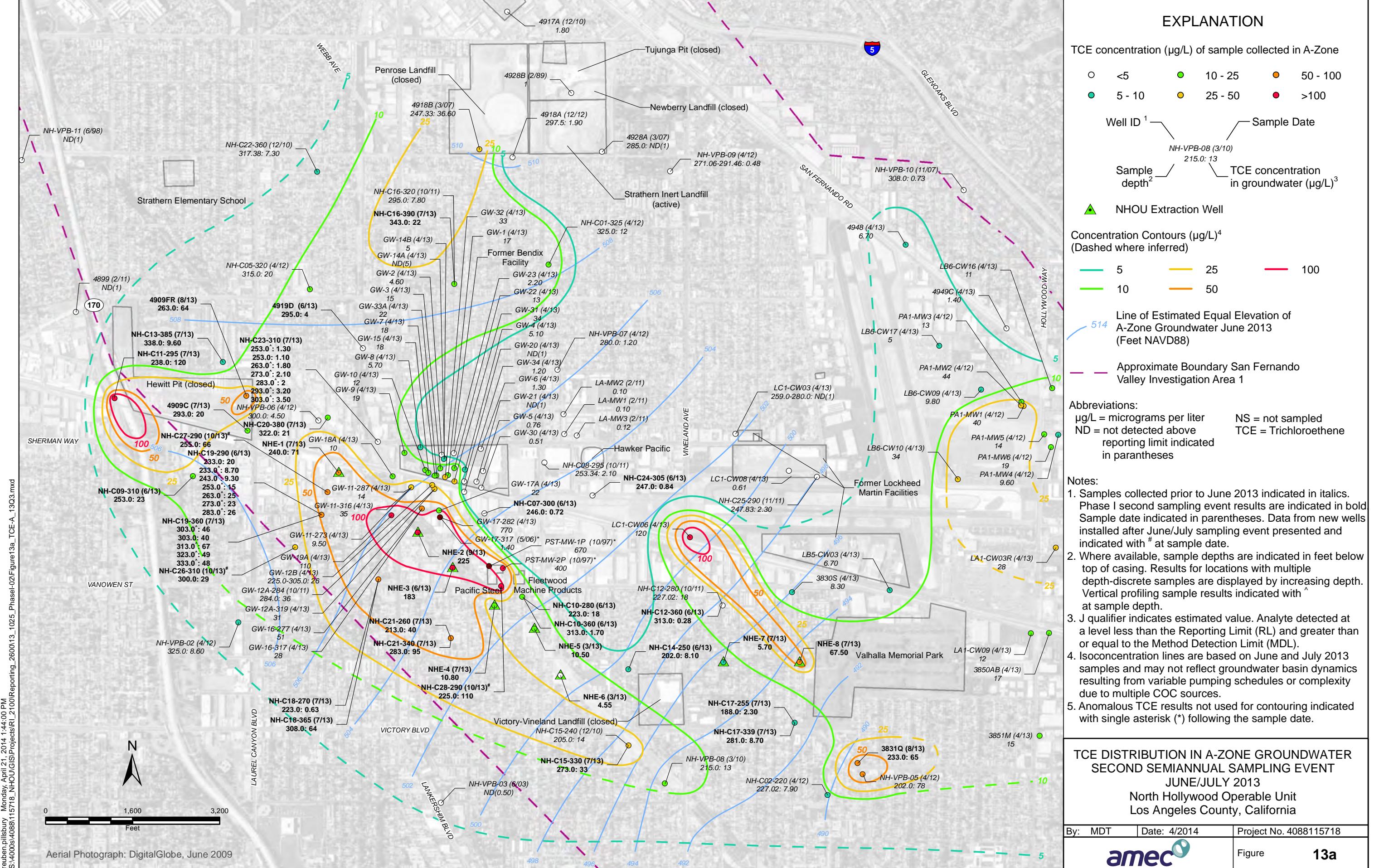
The amec logo consists of the lowercase word "amec" in a bold, dark blue sans-serif font. A light blue, abstract, rounded rectangular shape is positioned above the letter "c", partially overlapping it.

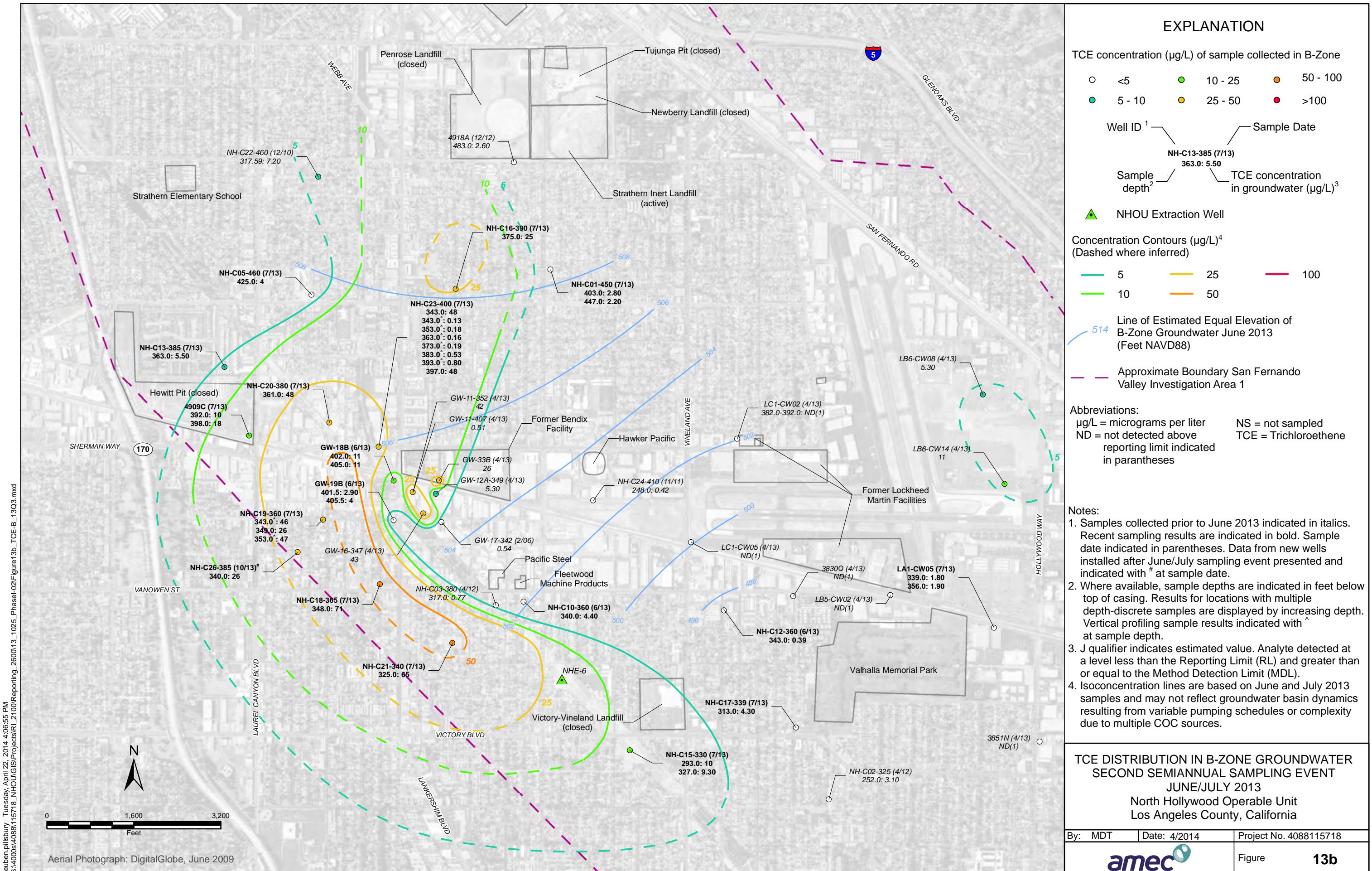
**NH-C23-400 Vertical Flow Profile
Phase 1 Pre-Design Investigation,
NHOU Second Interim Remedy
Los Angeles County, California**

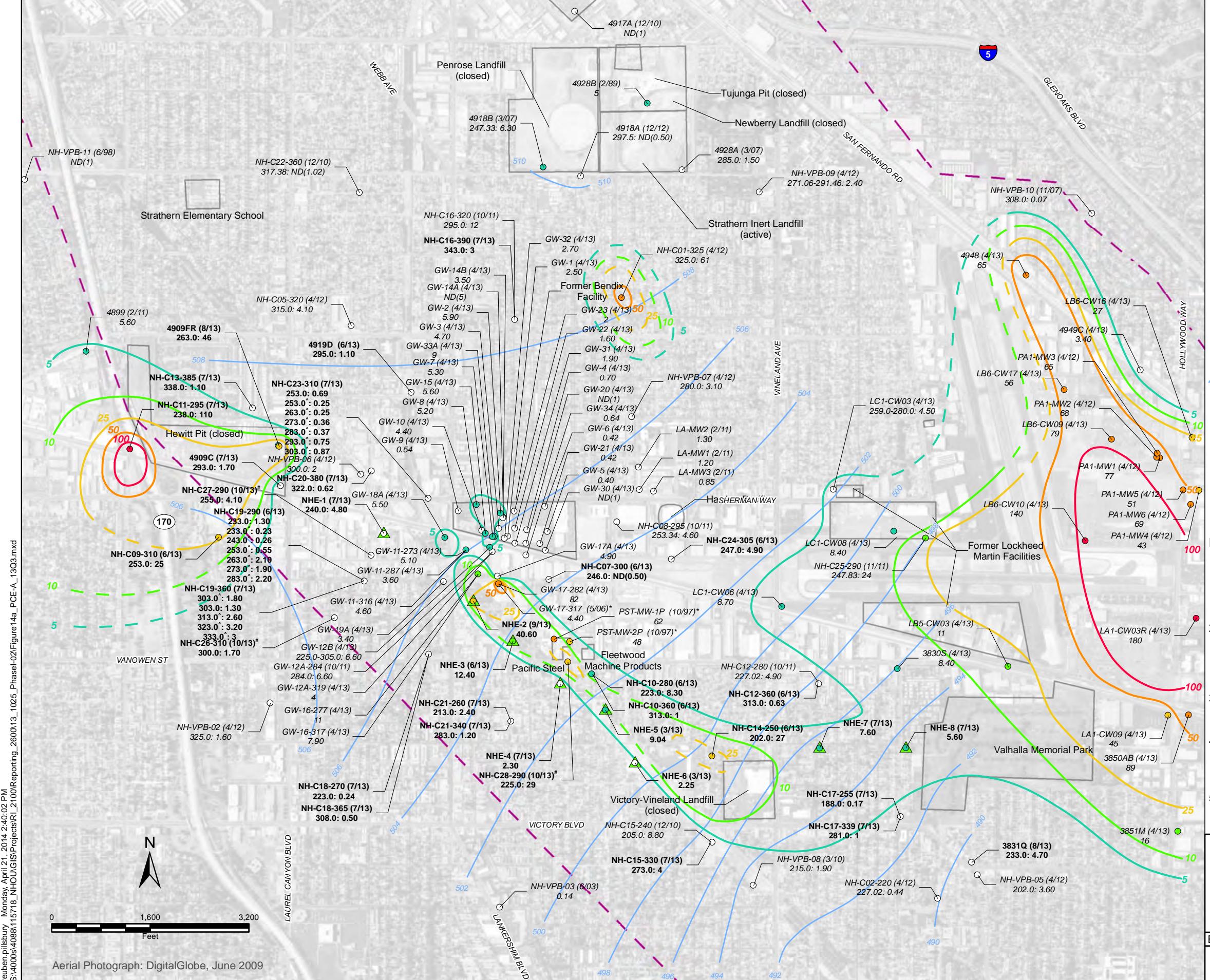
Figure:

12

DRAWN
GFS







EXPLANATION

PCE concentration ($\mu\text{g/L}$) of sample collected in A-Zone

<5	$10 - 25$	$50 - 100$
$5 - 10$	$25 - 50$	>100

Well ID¹

Sample Date

Sample depth²

PCE concentration in groundwater ($\mu\text{g/L}$)³

NHOU Extraction Well

Concentration Contours ($\mu\text{g/L}$)⁴
(Dashed where inferred)

5	25	100
10	50	

Line of Estimated Equal Elevation of
A-Zone Groundwater June 2013
(Feet NAVD88)

Approximate Boundary San Fernando
Valley Investigation Area 1

Abbreviations:

$\mu\text{g/L}$ = micrograms per liter

ND = not detected above reporting limit indicated in parentheses

NS = not sampled

PCE = Tetrachloroethene

Notes:

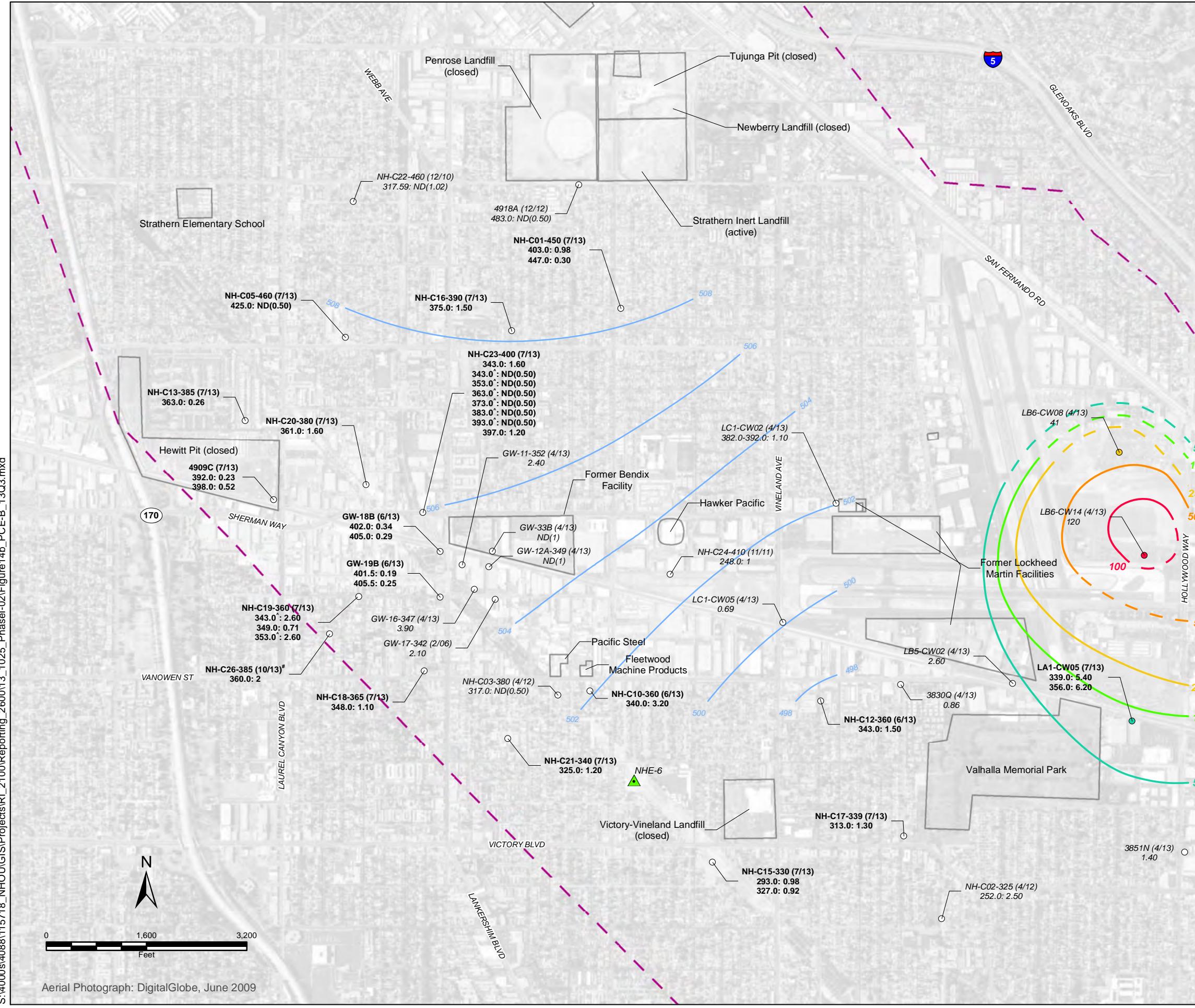
1. Samples collected prior to June 2013 indicated in italics. Recent sampling results are indicated in bold. Sample date indicated in parentheses. Data from new wells installed after June/July sampling event presented and indicated with # at sample date.
2. Where available, sample depths are indicated in feet below top of casing. Results for locations with multiple depth-discrete samples are displayed by increasing depth. Vertical profiling sample results indicated with ^ at sample depth.
3. J qualifier indicates estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).
4. Isoconcentration lines are based on June and July 2013 samples and may not reflect groundwater basin dynamics resulting from variable pumping schedules or complexity due to multiple COC sources.
5. Anomalous PCE results not used for contouring indicated with single asterisk (*) following the sample date.

PCE DISTRIBUTION IN A-ZONE GROUNDWATER SECOND SEMIANNUAL SAMPLING EVENT

JUNE/JULY 2013

North Hollywood Operable Unit
Los Angeles County, California

By: MDT Date: 4/2014 Project No. 4088115718



EXPLANATION

PCE concentration ($\mu\text{g}/\text{L}$) of sample collected in B-Zone

○ <5	● 10 - 25	● 50 - 100
● 5 - 10	● 25 - 50	● >100

Well ID¹ Sample Date

Sample depth² PCE concentration in groundwater ($\mu\text{g}/\text{L}$)³

NHOU Extraction Well

Concentration Contours ($\mu\text{g}/\text{L}$)⁴
(Dashed where inferred)

— 5	— 25	— 100
— 10	— 50	

Line of Estimated Equal Elevation of B-Zone Groundwater June 2013
(Feet NAVD88)

Approximate Boundary San Fernando Valley Investigation Area 1

Abbreviations:

$\mu\text{g}/\text{L}$ = micrograms per liter
ND = not detected above reporting limit indicated in parentheses
NS = not sampled
PCE = Tetrachloroethene

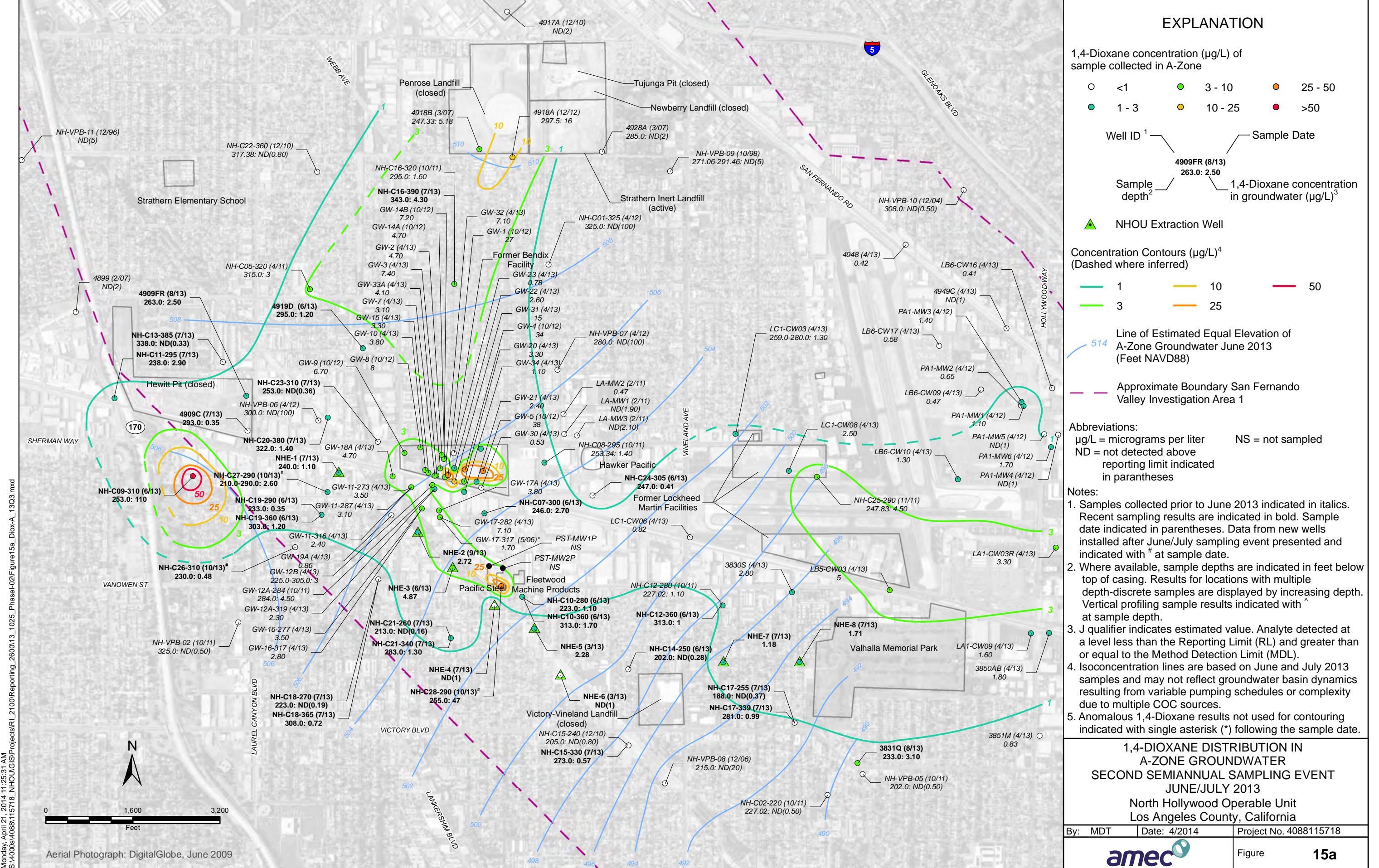
Notes:

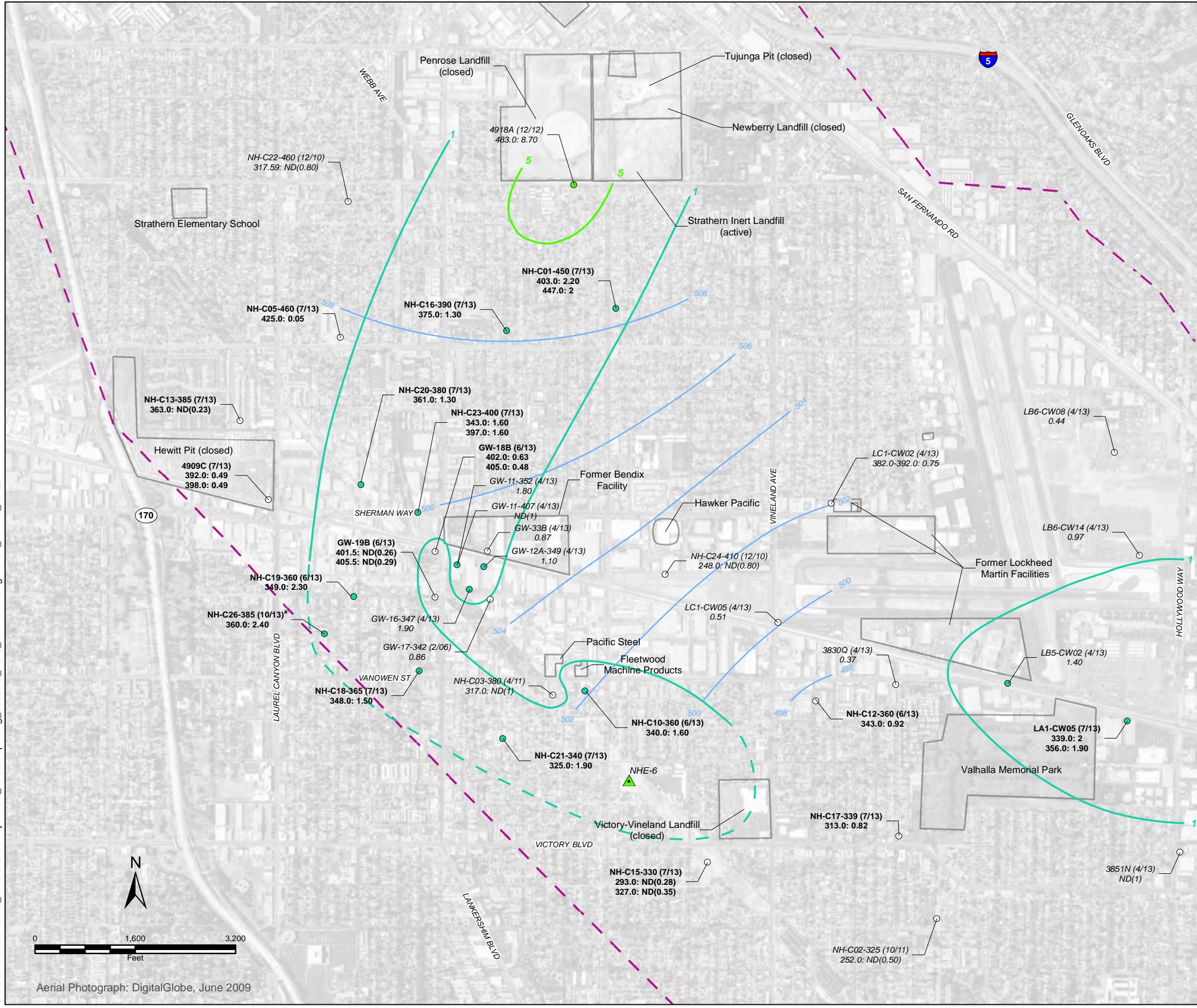
1. Samples collected prior to June 2013 indicated in italics. Recent sampling results are indicated in bold. Sample date indicated in parentheses. Data from new wells installed after June/July sampling event presented and indicated with # at sample date.
2. Where available, sample depths are indicated in feet below top of casing. Results for locations with multiple depth-discrete samples are displayed by increasing depth. Vertical profiling sample results indicated with ^ at sample depth.
3. J qualifier indicates estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).
4. Isoconcentration lines are based on June and July 2013 samples and may not reflect groundwater basin dynamics resulting from variable pumping schedules or complexity due to multiple COC sources.

PCE DISTRIBUTION IN B-ZONE GROUNDWATER SECOND SEMIANNUAL SAMPLING EVENT JUNE/JULY 2013

North Hollywood Operable Unit
Los Angeles County, California

By: MDT Date: 4/2014 Project No. 4088115718





EXPLANATION

1,4-Dioxane concentration ($\mu\text{g}/\text{L}$) of sample collected in B-Zone

○ <1	● 1 - 3	● 3 - 10
Well ID ¹	Sample Date	Sample depth ²
NH-C16-390 (7/13) 375.0: 1.30	1,4-Dioxane concentration in groundwater ($\mu\text{g}/\text{L}$) ³	

▲ NHOU Extraction Well

Concentration Contours ($\mu\text{g}/\text{L}$)⁴
(Dashed where inferred)

— 1 — 3

Line of Estimated Equal Elevation of B-Zone Groundwater June 2013
(Feet NAVD88)

— Approximate Boundary San Fernando Valley Investigation Area 1

Abbreviations:

$\mu\text{g}/\text{L}$ = micrograms per liter NS = not sampled
ND = not detected above reporting limit indicated in parentheses

Notes:

- Samples collected prior to June 2013 indicated in italics. Recent sampling results are indicated in bold. Sample date indicated in parentheses. Data from new wells installed after June/July sampling event presented and indicated with # at sample date.
- Where available, sample depths are indicated in feet below top of casing. Results for locations with multiple depth-discrete samples are displayed by increasing depth. Vertical profiling sample results indicated with ^ at sample depth.
- J qualifier indicates estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).
- Isoconcentration lines are based on June and July 2013 samples and may not reflect groundwater basin dynamics resulting from variable pumping schedules or complexity due to multiple COC sources.

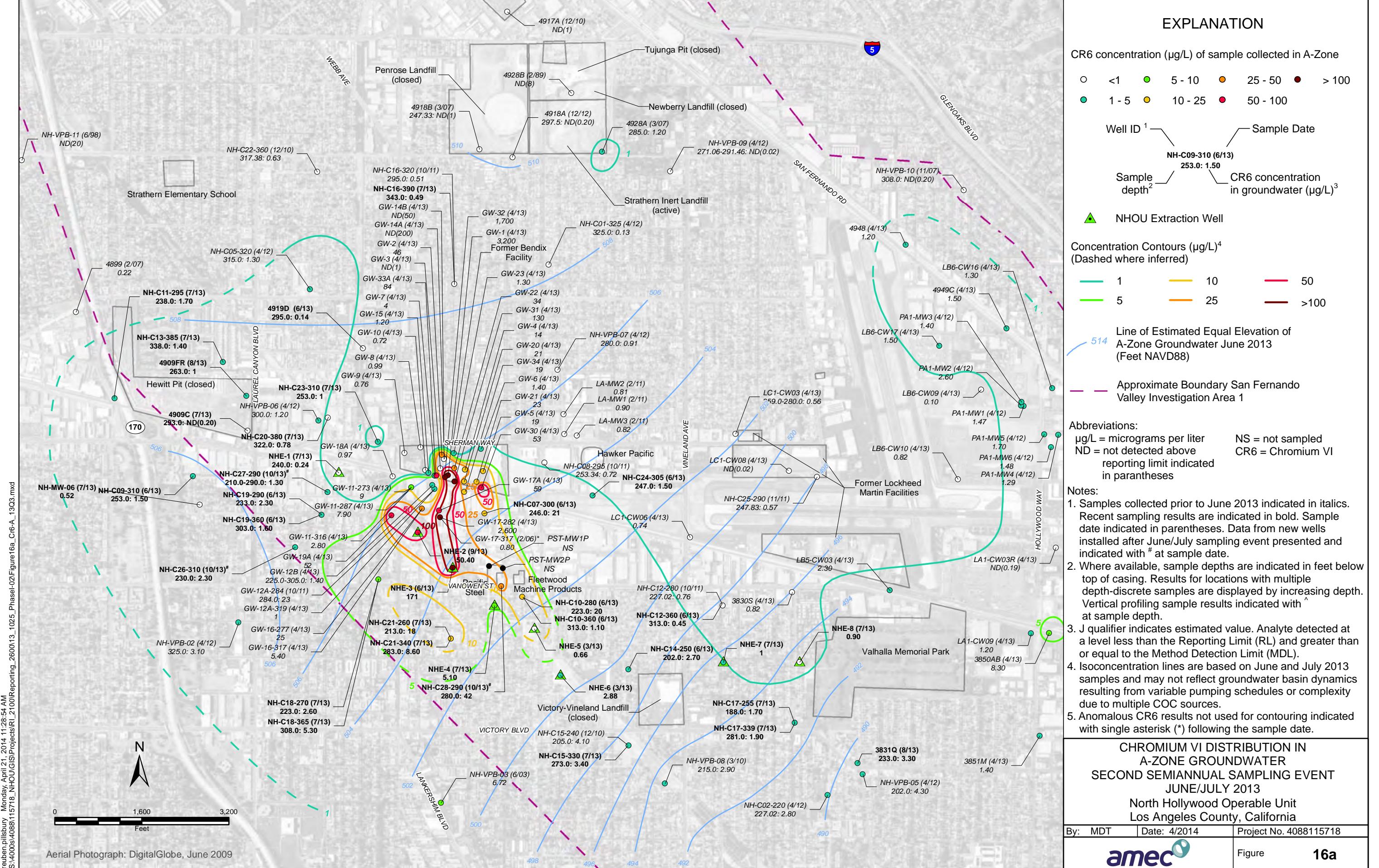
1,4-DIOXANE DISTRIBUTION IN B-ZONE GROUNDWATER SECOND SEMIANNUAL SAMPLING EVENT JUNE/JULY 2013

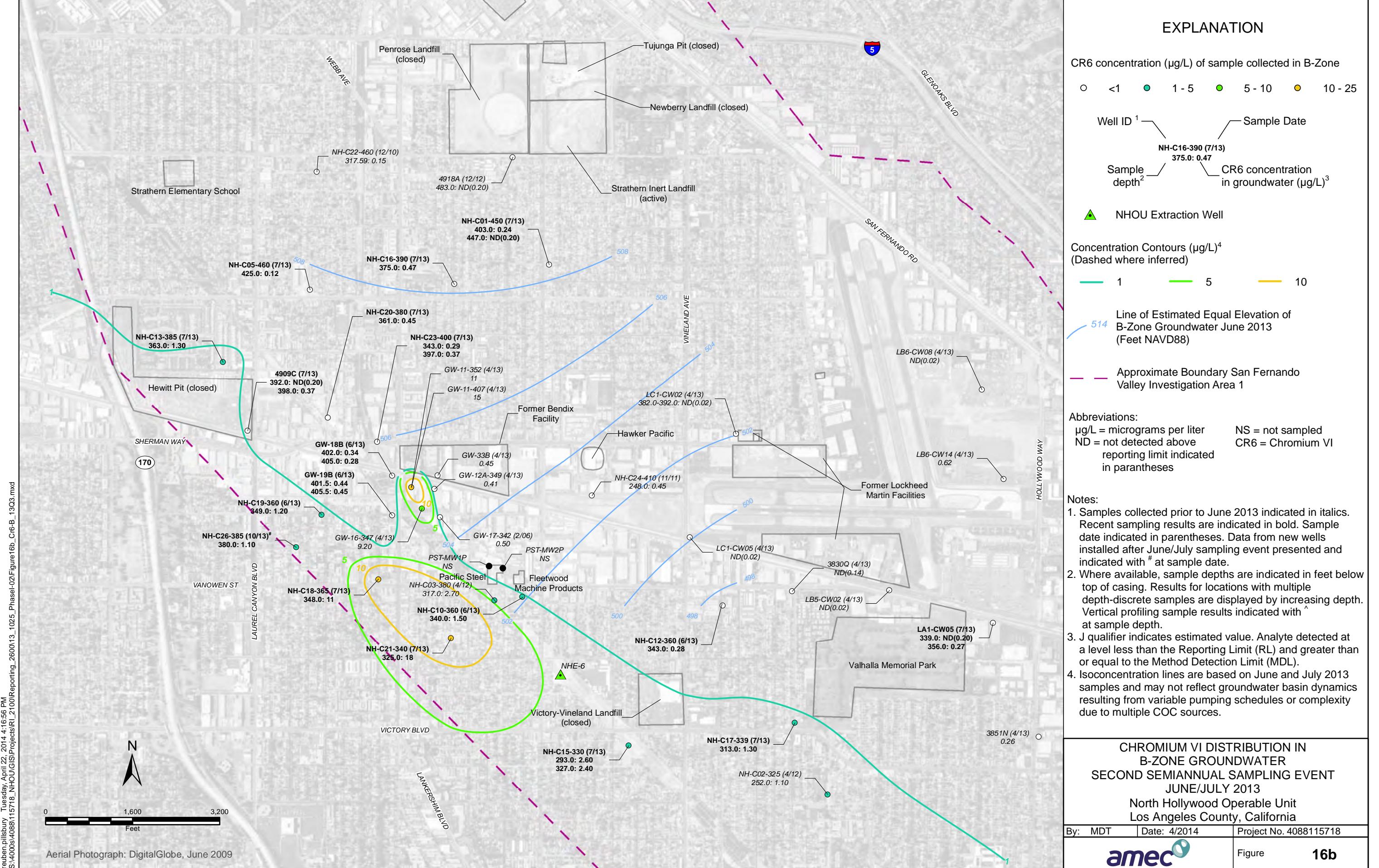
North Hollywood Operable Unit
Los Angeles County, California

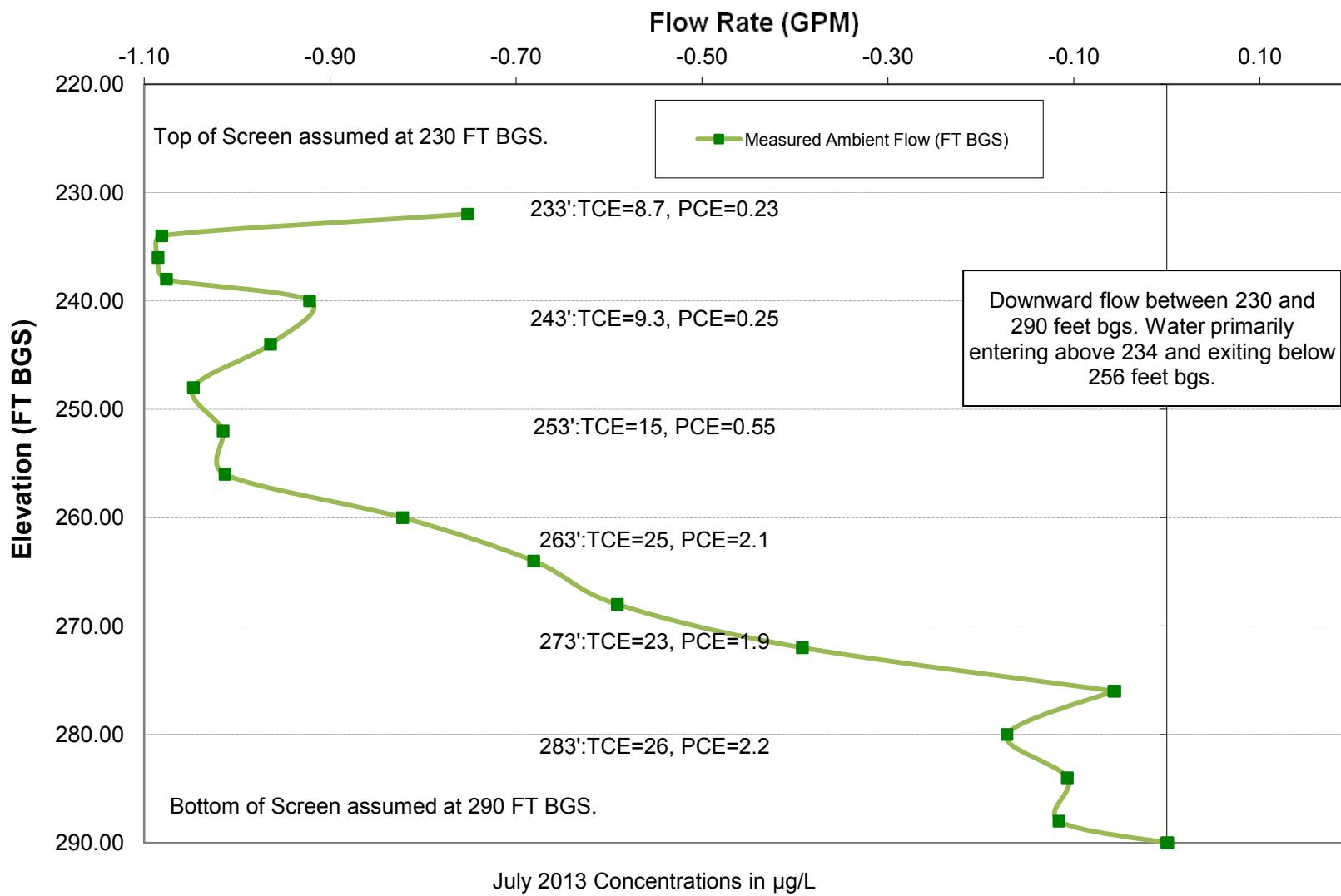
By: MDT Date: 4/2014 Project No. 4088115718



Figure 15b



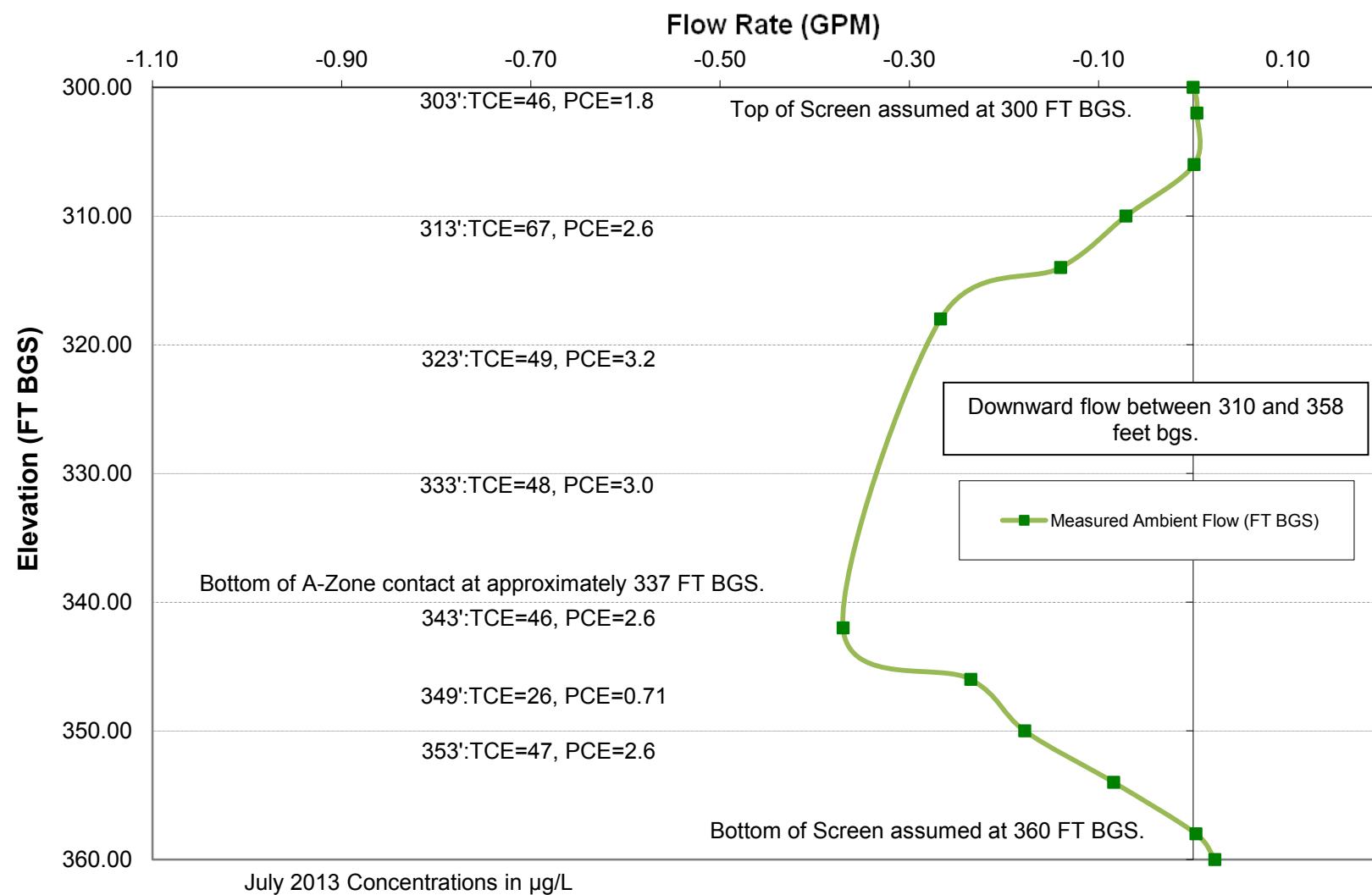


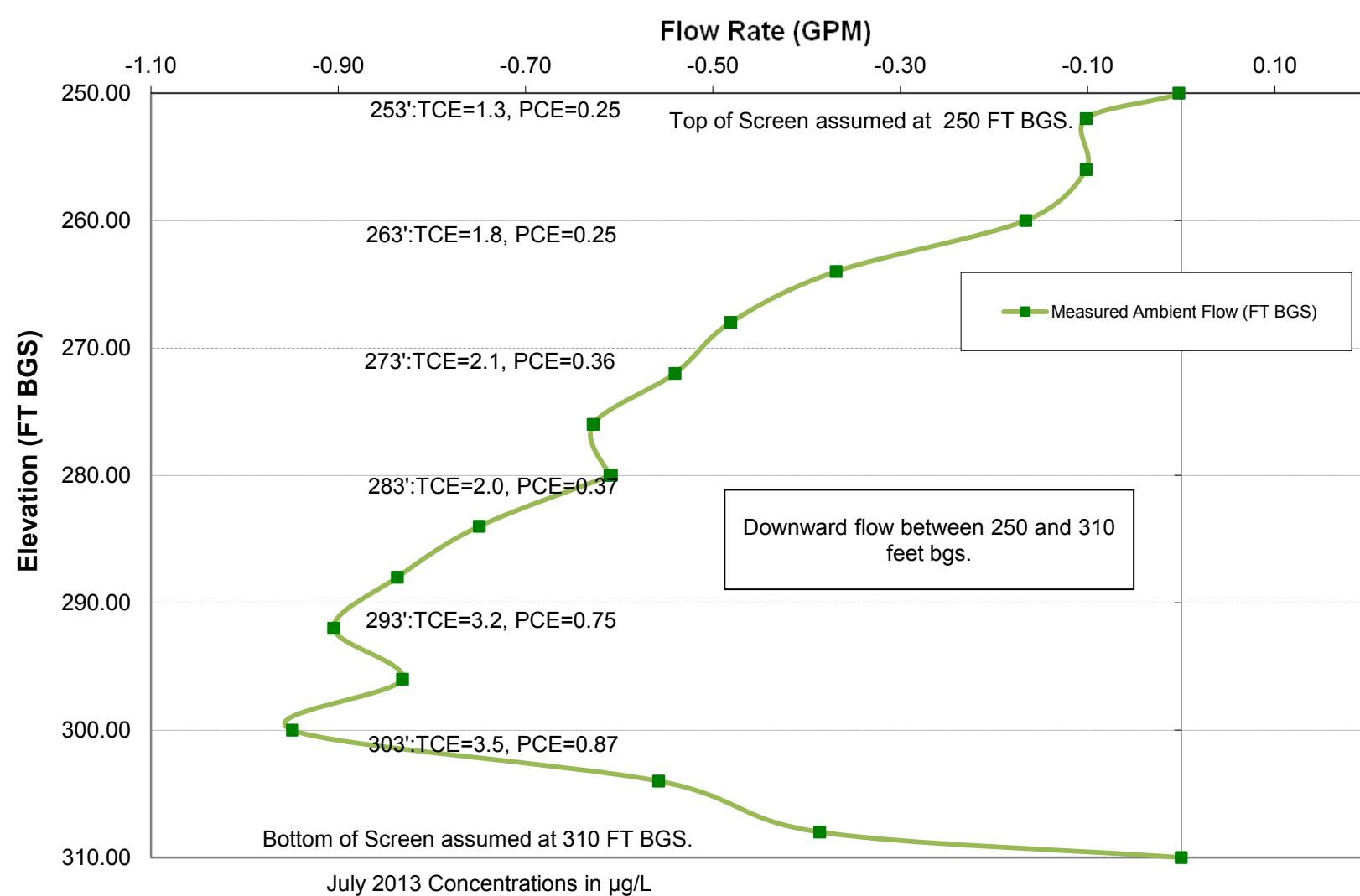


NH-C19-290 Vertical Concentration Profile
Second Semiannual Phase 1 Pre-Design Investigation,
NHOU Second Interim Remedy
Los Angeles County, California

Figure:

17

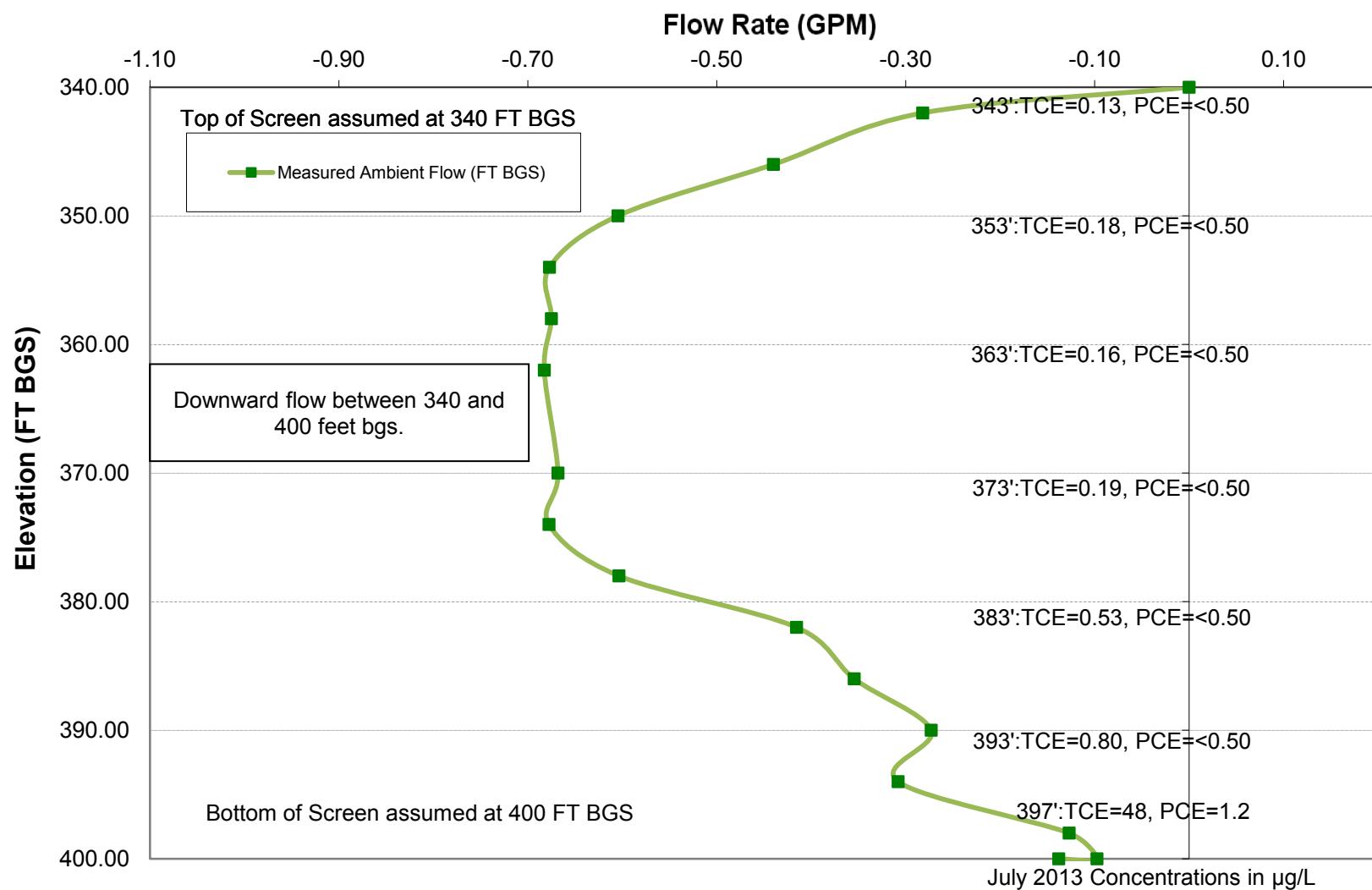




NH-C23-310 Vertical Concentration Profile
Second Semiannual Phase 1 Pre-Design Investigation,
NHOU Second Interim Remedy
Los Angeles County, California

Figure:

19



NH-C23-400 Vertical Concentration Profile
Second Semiannual Phase 1 Pre-Design Investigation,
NHOU Second Interim Remedy
Los Angeles County, California

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JOB NUMBER
162830

Figure:

20

ATTACHMENT A

Results of Detected Analytes

TABLE A-1A

ORGANIC ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California



Sample	Sampling Method	Test Method	EPA 521					EPA 522	EPA 524M-TCP		EPA 524.2				
		Analyte/ Units:	N-Nitrosodiethylamine (ng/L)	N-Nitrosodimethylamine (ng/L)	N-Nitrosodi-n-butylamine (ng/L)	N-Nitrosodi-n-propylamine (ng/L)	N-Nitrosomorpholine (ng/L)	1,4-Dioxane (µg/L)	1,2,3-Trichloropropane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1,2-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	1,1-Dichloroethene (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,2-Dichlorobenzene (µg/L)
		Sample Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
3831Q_233	Low Flow	8/1/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	3.2	3.1	0.0071	ND(0.50) U	ND(0.50) U	0.30 J/J	0.65	ND(0.50) U	ND(0.50) U
4909C_293	Low Flow	1/7/2013	1.4 J/J	ND(2.0) U/J	ND(2.0) U	ND(2.0) U	0.75 J/J	ND(0.27) U	ND(0.005) U	ND(0.50) U	ND(0.50) U	3.7	1.8	0.038 J/J	ND(0.50) U
4909C_293	Low Flow	7/12/2013	ND(2.0) U	ND(2.0) U/J	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.35	ND(0.005) U	0.049 J/J	ND(0.50) U	1.9	0.41 J/J	ND(0.50) U	ND(0.50) U
4909FR_263	Low Flow	8/16/2013	ND(2.0) U	0.46 J	ND(2.0) U	ND(2.0) U	ND(2.0) U	2.5	ND(0.005) U	0.19 J/J	ND(0.50) U	18.	0.81	ND(0.50) U	ND(0.50) U
4918A_297.5	Low Flow	12/20/2012	1.8 J/J	ND(2.0) U	ND(2.0) U/J	ND(2.0) U	2.4	16.	ND(0.005) U/J	0.95	ND(0.50) U	1.7	13.	ND(0.50) U	ND(0.50) U
4919D_295	Low Flow	12/6/2012	ND(2.0) U	ND(2.0) U/J	ND(2.0) U	ND(2.0) U	2.8	0.67	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.047 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U
4919D_295	Low Flow	6/21/2013	4.3 J	ND(2.0) U/J	ND(2.0) U	ND(2.0) U	2.0	1.2	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.21 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C07-300_246	Low Flow	6/28/2013	3.2 J	ND(2.0) U/J	ND(2.0) U	ND(2.0) U	4.2	2.7	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.58	0.067 J/J	ND(0.50) U	ND(0.50) U
NH-C07-300_246-dup-2	Low Flow	6/28/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U/J	ND(2.0) U	5.2	2.7	0.0025 J/J	ND(0.50) U	ND(0.50) U	0.52	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C09-310_253	Low Flow	6/28/2013	1.7 J/J	ND(2.0) U	ND(2.0) U/J	ND(2.0) U	12. J	110. /DIL	ND(0.005) U	0.41 J/J	ND(0.50) U	7.9	1.4	ND(0.50) U	0.047 J/J
NH-C10-280_223	Low Flow	6/25/2013	1.2 J/J	ND(2.0) U	ND(2.0) U/J	ND(2.0) U	5.5	1.1	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.19 J/J	0.07 J/J	ND(0.50) U	ND(0.50) U
NH-C10-360_313	Low Flow	12/14/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	1.1 J/J	1.6	ND(0.005) U	ND(0.50) U	ND(0.50) U	1.1	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C10-360_313	Low Flow	6/25/2013	1.2 J/J	ND(2.0) U/J	ND(2.0) U/J	ND(2.0) U	1.2 J/J	1.7	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.84	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C11-295_238	Low Flow	7/9/2013	ND(2.0) U	4.4 J	ND(2.0) U/J	ND(2.0) U/J	ND(2.0) U	2.9	ND(0.005) U	1.4	0.15 J/J	0.99	4.3	ND(0.50) U	ND(0.50) U
NH-C12-360_313	Low Flow	12/26/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	1.7 J/J	1.2	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.78	0.084 J/J	ND(0.50) U	ND(0.50) U
NH-C12-360_313	Low Flow	6/24/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.68 J/J	1.0	ND(0.005) U	ND(0.50) U	ND(0.50) U	1.2	0.079 J/J	ND(0.50) U	ND(0.50) U
NH-C13-385_338	Low Flow	12/12/2012	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	0.60 J/J	ND(0.14) U	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C13-385_338	Low Flow	7/11/2013	ND(2.0) U	3.1 J	ND(2.0) U	ND(2.0) U	2.5	ND(0.33) U	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.18 J/J	ND(0.50) U	ND(0.50) U
NH-C14-250_202	Low Flow	6/28/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U/J	ND(2.0) U	1.0 J/J	ND(0.28) U	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.16 J/J	0.19 J/J	ND(0.50) U
NH-C14-250_203	Low Flow	12/26/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	1.9 J/J	ND(0.44) U	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.18 J/J	0.39 J/J	ND(0.50) U
NH-C15-330_273	Low Flow	7/16/2013	1.0 J	ND(2.0) U/J	ND(4.0) U	ND(4.0) U	0.57	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.098 J/J	ND(0.50) U	ND(0.50) U
NH-C16-390_343	Low Flow	12/4/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	2.1	3.4	ND(0.005) U	0.31 J/J	ND(0.50) U	0.36 J/J	1.8	ND(0.50) U	ND(0.50) U
NH-C16-390_343	Low Flow	7/8/2013	1.0 J	ND(2.0) U/J	ND(2.0) U	ND(2.0) U	1.7 J	4.3	ND(0.005) U	0.22 J/J	ND(0.50) U	0.44 J/J	1.4	ND(0.50) U	0.032 J/J
NH-C17-255_188	Low Flow	7/2/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(0.37) U	ND(0.005) U	ND(0.50) U/J	ND(0.50) U	ND(0.50) U/J	0.12 J/J	ND(0.50) U	ND(0.50) U
NH-C17-255_188-dup-3	Low Flow	7/2/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(0.37) U	ND(0.005) U	ND(0.50) U/J	ND(0.50) U	ND(0.50) U	0.089 J/J	ND(0.50) U	ND(0.50) U
NH-C17-339_281	Low Flow	1/2/2013	ND(2.0) U	0.41 J/J	ND(2.0) U/J	ND(2.0) U	0.90 J/J	1.2	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.92	0.18 J/J	ND(0.50) U	ND(0.50) U
NH-C17-339_281	Low Flow	7/2/2013	1.0 J/J	ND(2.0) U	ND(2.0) U	ND(2.0) U	1.2 J/J	0.99	ND(0.005) U	ND(0.50) U/J	ND(0.50) U	ND(0.50) U/J	0.21 J/J	ND(0.50) U	0.036 J/J
NH-C18-270_223	Low Flow	12/11/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U/J	ND(2.0) U	0.56 J/J	ND(0.24) U	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C18-270_223	Low Flow	7/3/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(0.20) U	ND(0.005) U	ND(0.50) U/J	ND(0.50) U	ND(0.50) U	0.036 J/J	0.12 J/J	ND(0.50) U
NH-C18-270_223-dup-4	Low Flow	7/3/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(0.19) U	ND(0.005) U	ND(0.50) U/J	ND(0.50) U	ND(0.50) U	0.078 J/J	ND(0.50) U	ND(0.50) U
NH-C18-365_308	Low Flow	12/7/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U/J	ND(2.0) U	3.2	1.6	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.50 J/J	0.41 J/J	ND(0.50) U	ND(0.50) U
NH-C18-365_308	Low Flow	7/16/2013	ND(2.0) U	ND(2.0) U/J	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.72	ND(0.005) U	0.092 J/J	ND(0.50) U	0.38 J/J	0.49 J/J	ND(0.50) U	ND(0.50) U
NH-C19-290_233	Low Flow	12/21/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	24.	ND(0.76) U	ND(0.005) U						

TABLE A-1A

ORGANIC ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California



Sample	Sampling Method	EPA 524.2														
		Test Method		1,2-Dichloroethane (µg/L)	1,2-Dichloropropane (µg/L)	1,3,5-Trimethylbenzene (µg/L)	2-Butanone (µg/L)	Acetone (µg/L)	Benzene (µg/L)	Bromodichloromethane (µg/L)	Carbon disulfide (µg/L)	Carbon tetrachloride (µg/L)	Chlorobenzene (µg/L)	Chloroethane (µg/L)	Chloroform (µg/L)	Chloromethane (µg/L)
		Analyte/ Units:	Sample Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
3831Q_233	Low Flow	8/1/2013	0.19 J/J	ND(0.50) U	ND(0.50) U	ND(2.0) U	1.5 J/J	ND(0.50) U	0.15 J/J	ND(0.50) U	0.39 J/J	ND(0.50) U	ND(0.50) U	1.1 J	ND(0.50) U/B,J	
4909C_293	Low Flow	1/7/2013	ND(0.50) U	0.15 J/J	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.096 J/J	0.074 J/J	ND(0.50) U/J	
4909C_293	Low Flow	7/12/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J/J	0.046 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.38 J/J	ND(0.50) U/J	
4909FR_263	Low Flow	8/16/2013	0.41 J/J	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J	0.046 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	3.6	ND(0.50) U	
4918A_297.5	Low Flow	12/20/2012	0.21 J/J	ND(0.50) U	ND(0.50) U	ND(2.0) U	1.7 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.36 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	
4919D_295	Low Flow	12/6/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.67	ND(0.50) U/B,J	
4919D_295	Low Flow	6/21/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J	ND(0.50) U	0.12 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.66	ND(0.50) U/B,J	
NH-C07-300_246	Low Flow	6/28/2013	0.15 J/J	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J	0.18 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.32 J/J	ND(0.50) U/B,J	
NH-C07-300_246-dup-2	Low Flow	6/28/2013	0.16 J/J	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J	0.21 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.30 J/J	ND(0.50) U/B,J	
NH-C09-310_253	Low Flow	6/28/2013	0.40 J/J	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J/J	0.072 J/J	ND(0.50) U	0.081 J/J	ND(0.50) U	0.045 J/J	ND(0.50) U	2.1	ND(0.50) U/B,J	
NH-C10-280_223	Low Flow	6/25/2013	0.66	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U	ND(0.50) U	0.27 J/J	ND(0.50) U	0.45 J/J	ND(0.50) U	ND(0.50) U	2.4	ND(0.50) U/B,J	
NH-C10-360_313	Low Flow	12/14/2012	0.41 J/J	0.16 J/J	ND(0.50) U	ND(2.0) U	ND(10.) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.18 J/J	ND(0.50) U/B,J	
NH-C10-360_313	Low Flow	6/25/2013	0.31 J/J	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.16 J/J	ND(0.50) U/B,J	
NH-C11-295_238	Low Flow	7/9/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J/J	ND(0.50) U	ND(0.50) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.13 J/J	ND(0.50) U	2.9	ND(0.50) U/J
NH-C12-360_313	Low Flow	12/26/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.18 J/J	ND(0.50) U	ND(0.50) U	0.14 J/J	ND(0.50) U/J	
NH-C12-360_313	Low Flow	6/24/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.13 J/J	ND(0.50) U/B,J	
NH-C13-385_338	Low Flow	12/12/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.13 J/J	ND(0.50) U	
NH-C13-385_338	Low Flow	7/11/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J/J	ND(0.50) U/J	0.095 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.55	ND(0.50) U/J	
NH-C14-250_202	Low Flow	6/28/2013	3.3	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J	ND(0.50) U	0.99	ND(0.50) U	0.40 J/J	0.042 J/J	ND(0.50) U	2.8	ND(0.50) U/B,J	
NH-C14-250_203	Low Flow	12/26/2012	2.6	0.23 J/J	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	1.1	ND(0.50) U	0.38 J/J	ND(0.50) U	ND(0.50) U	2.6	ND(0.50) U/J	
NH-C15-330_273	Low Flow	7/16/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U/J	ND(10.) U/J/J	ND(0.50) U	0.097 J/J	ND(0.50) U	0.15 J/J	ND(0.50) U	ND(0.50) U	2.0	ND(0.50) U/B,J	
NH-C16-390_343	Low Flow	12/4/2012	0.15 J/J	ND(0.50) U	ND(0.50) U	ND(2.0) U	1.7 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.29 J/J	ND(0.50) U	
NH-C16-390_343	Low Flow	7/8/2013	0.29 J/J	0.095 J/J	ND(0.50) U	ND(2.0) U/J	ND(10.) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.28 J/J	ND(0.50) U/J	
NH-C17-255_188	Low Flow	7/2/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U/J	ND(10.) U/J	ND(0.50) U	0.17 J/J	ND(0.50) U	0.51	ND(0.50) U	ND(0.50) U	0.79	ND(0.50) U/B,J	
NH-C17-255_188-dup-3	Low Flow	7/2/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U/J	ND(10.) U/J/J	ND(0.50) U	0.17 J/J	ND(0.50) U	0.51	ND(0.50) U	ND(0.50) U	0.75	ND(0.50) U/B,J	
NH-C17-339_281	Low Flow	1/2/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.14 J/J	ND(0.50) U	ND(0.50) U	0.20 J/J	ND(0.50) U	
NH-C17-339_281	Low Flow	7/2/2013	0.42 J/J	ND(0.50) U	ND(0.50) U	ND(2.0) U/J	ND(10.) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.36 J/J	ND(0.50) U	ND(0.50) U	0.61	ND(0.50) U/B,J	
NH-C18-270_223	Low Flow	12/11/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	18.	ND(0.50) U	
NH-C18-270_223	Low Flow	7/3/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U/J	ND(10.) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	13.	ND(0.50) U/B,J	
NH-C18-270_223-dup-4	Low Flow	7/3/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U/J	ND(10.) U/J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	13.	ND(0.50) U/B,J	
NH-C18-365_308	Low Flow	12/7/2012	0.18 J/J	0.13 J/J	ND(0.50) U											

TABLE A-1A

ORGANIC ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California



Sample	Sampling Method	Test Method	EPA 524.2														
		Analyte/ Units:	cis-1,2-Dichloroethene (µg/L)	Dibromochloromethane (µg/L)	Dichlorodifluoromethane (µg/L)	Diethyl Ether (µg/L)	Ethanol (µg/L)	Ethylbenzene (µg/L)	Freon 113 (µg/L)	Iodomethane (µg/L)	Methylene chloride (µg/L)	Naphthalene (µg/L)	n-Butylbenzene (µg/L)	o-Xylene (µg/L)	p-Isopropyltoluene (µg/L)		
		Sample Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual			
3831Q_233	Low Flow	8/1/2013	0.76	ND(0.50) U	0.49 J/J	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) UJ	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U		
4909C_293	Low Flow	1/7/2013	1.3	ND(0.50) U	5.3	0.13 J/J	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
4909C_293	Low Flow	7/12/2013	1.0	ND(0.50) U	ND(0.50) U	0.24 J/J	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U
4909FR_263	Low Flow	8/16/2013	11.	ND(0.50) U	3.0	0.84 J	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
4918A_297.5	Low Flow	12/20/2012	3.9	ND(0.50) U	0.29 J/J	0.26 J/J	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.081 J/J	ND(0.50) U	ND(0.50) U
4919D_295	Low Flow	12/6/2012	0.27 J/J	ND(0.50) U	0.13 J/J	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U
4919D_295	Low Flow	6/21/2013	0.75	ND(0.50) U	ND(0.50) R	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U/J	ND(0.50) U/B,J	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C07-300_246	Low Flow	6/28/2013	0.26 J/J	ND(0.50) U	0.33 J/J	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U/J	ND(0.50) U/B,J	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C07-300_246-dup-2	Low Flow	6/28/2013	0.24 J/J	ND(0.50) U	0.29 J/J	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U
NH-C09-310_253	Low Flow	6/28/2013	9.7	ND(0.50) U	26.	0.63	ND(0.50) R	ND(0.50) U	0.37 J/J	ND(2.0) UJ	ND(0.50) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U
NH-C10-280_223	Low Flow	6/25/2013	0.34 J/J	ND(0.50) U	ND(0.50) R	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C10-360_313	Low Flow	12/14/2012	8.3	ND(0.50) U	3.2 J	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U
NH-C10-360_313	Low Flow	6/25/2013	5.5	ND(0.50) U	1.6	ND(0.50) R	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.035 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C11-295_238	Low Flow	7/9/2013	1.5	ND(0.50) U	1.3	ND(0.50) UJ	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C12-360_313	Low Flow	12/26/2012	0.29 J/J	ND(0.50) U	0.71	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U/J	ND(0.50) U	ND(0.50) U
NH-C12-360_313	Low Flow	6/24/2013	0.41 J/J	ND(0.50) U	0.82	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C13-385_338	Low Flow	12/12/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.044 J/J	ND(0.50) U	ND(0.50) U
NH-C13-385_338	Low Flow	7/11/2013	0.37 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C14-250_202	Low Flow	6/28/2013	0.39 J/J	0.18 J/J	0.20 J/J	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C14-250_203	Low Flow	12/26/2012	0.72	0.19 J/J	0.48 J/J	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C15-330_273	Low Flow	7/16/2013	0.49 J/J	ND(0.50) UJ	0.82	ND(0.50) UJ	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	0.10 J/J	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C16-390_343	Low Flow	12/4/2012	2.8	ND(0.50) U	1.0	ND(0.50) U	ND(0.50) R	0.048 J/J	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	0.075 J/J	ND(0.50) U	ND(0.50) U
NH-C16-390_343	Low Flow	7/8/2013	4.4	ND(0.50) U	1.4	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C17-255_188	Low Flow	7/2/2013	0.084 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C17-255_188-dup-3	Low Flow	7/2/2013	0.08 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C17-339_281	Low Flow	1/2/2013	0.60	ND(0.50) U	2.6	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C17-339_281	Low Flow	7/2/2013	0.30 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C18-270_223	Low Flow	12/11/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) R	ND(0.50) U</td										

TABLE A-1A

ORGANIC ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	Test Method	EPA 524.2							
			Analyte/ Units:	tert-Butyl methyl ether (µg/L)	Tetrachloroethene (µg/L)	Tetrahydrofuran (µg/L)	Toluene (µg/L)	trans-1,2-Dichloroethene (µg/L)	Trichloroethene (µg/L)	Trichlorofluoromethane (µg/L)
		Sample Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
3831Q_233	Low Flow	8/1/2013	ND(0.50) U	4.7	ND(5.0) U	ND(0.50) U	ND(0.50) U	65. J	0.06 J/J	ND(0.50) U
4909C_293	Low Flow	1/7/2013	ND(0.50) U	14.	ND(5.0) U/J	ND(0.50) U/B,J	ND(0.50) U	50.	0.17 J/J	ND(0.50) U
4909C_293	Low Flow	7/12/2013	ND(0.50) U	1.7	0.72 J/J	ND(0.50) U/J	ND(0.50) U	20.	ND(0.50) U	ND(0.50) U
4909FR_263	Low Flow	8/16/2013	ND(0.50) U	46.	ND(5.0) U	ND(0.50) U	0.25 J/J	64. J	0.72	ND(0.50) U
4918A_297.5	Low Flow	12/20/2012	ND(0.50) U	ND(0.50) U	2.4 J/J	ND(0.50) U/B,J	ND(0.50) U	1.9	0.15 J/J	0.11 J/J
4919D_295	Low Flow	12/6/2012	0.39 J/J	0.55	ND(5.0) U	0.13 J/J	ND(0.50) U	15.	0.074 J/J	ND(0.50) U
4919D_295	Low Flow	6/21/2013	0.52	1.1	ND(5.0) R	ND(0.50) U	ND(0.50) U	4.0	0.053 J/J	ND(0.50) U
NH-C07-300_246	Low Flow	6/28/2013	ND(0.50) U	ND(0.50) U	ND(5.0) R	ND(0.50) U/J	ND(0.50) U	0.72	ND(0.50) U	ND(0.50) U
NH-C07-300_246-dup-2	Low Flow	6/28/2013	ND(0.50) U	ND(0.50) U	ND(5.0) R	ND(0.50) U/J	ND(0.50) U	0.68	ND(0.50) U	ND(0.50) U
NH-C09-310_253	Low Flow	6/28/2013	ND(0.50) U	25.	ND(5.0) R	ND(0.50) U/J	0.29 J/J	23.	3.3	ND(0.50) U
NH-C10-280_223	Low Flow	6/25/2013	0.074 J/J	8.3	ND(5.0) R	ND(0.50) U	ND(0.50) U	18.	ND(0.50) U	ND(0.50) U
NH-C10-360_313	Low Flow	12/14/2012	ND(0.50) U	3.3	ND(5.0) U	ND(0.50) U/J	0.39 J/J	3.2	0.12 J/J	ND(0.50) U
NH-C10-360_313	Low Flow	6/25/2013	ND(0.50) U	1.0	ND(5.0) R	ND(0.50) U/J	ND(0.50) U	1.7	0.092 J/J	ND(0.50) U
NH-C11-295_238	Low Flow	7/9/2013	ND(0.50) U	110. /DIL	ND(5.0) U/J	0.052 J/J	0.066 J/J	120. /DIL	0.36 J/J	ND(0.50) U
NH-C12-360_313	Low Flow	12/26/2012	ND(0.50) U	1.0	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	0.50 J/J	ND(0.50) U	ND(0.50) U
NH-C12-360_313	Low Flow	6/24/2013	ND(0.50) U	0.63	ND(5.0) R	ND(0.50) U/J	ND(0.50) U	0.28 J/J	0.10 J/J	ND(0.50) U
NH-C13-385_338	Low Flow	12/12/2012	ND(0.50) U	0.25 J/J	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	7.7	ND(0.50) U	ND(0.50) U
NH-C13-385_338	Low Flow	7/11/2013	ND(0.50) U	1.1	ND(5.0) U/J	ND(0.50) U/J	ND(0.50) U	9.6	ND(0.50) U	ND(0.50) U
NH-C14-250_202	Low Flow	6/28/2013	ND(0.50) U	27.	ND(5.0) R	ND(0.50) U	ND(0.50) U	8.1	ND(0.50) U	ND(0.50) U
NH-C14-250_203	Low Flow	12/26/2012	ND(0.50) U	16.	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	6.1	ND(0.50) U	ND(0.50) U
NH-C15-330_273	Low Flow	7/16/2013	ND(0.50) U	4.0	ND(5.0) U	ND(0.50) U	ND(0.50) U	33.	ND(0.50) U	ND(0.50) U
NH-C16-390_343	Low Flow	12/4/2012	ND(0.50) U	1.5	ND(5.0) U	0.16 J/J	ND(0.50) U	19.	0.89	ND(0.50) U
NH-C16-390_343	Low Flow	7/8/2013	ND(0.50) U	3.0	ND(5.0) U/J	ND(0.50) U	0.17 J/J	22.	0.74	ND(0.50) U
NH-C17-255_188	Low Flow	7/2/2013	ND(0.50) U	0.17 J/J	ND(5.0) U/J	ND(0.50) U/J	ND(0.50) U	2.3	ND(0.50) U	ND(0.50) U
NH-C17-255_188-dup-3	Low Flow	7/2/2013	ND(0.50) U	0.17 J/J	ND(5.0) U/J	ND(0.50) U/J	ND(0.50) U	2.2	ND(0.50) U	ND(0.50) U
NH-C17-339_281	Low Flow	1/2/2013	ND(0.50) U	1.7	ND(5.0) U	0.069 J/J	ND(0.50) U	0.91	0.25 J/J	ND(0.50) U
NH-C17-339_281	Low Flow	7/2/2013	ND(0.50) U	1.0	ND(5.0) U/J	ND(0.50) U/J	ND(0.50) U	8.7	ND(0.50) U	ND(0.50) U
NH-C18-270_223	Low Flow	12/11/2012	ND(0.50) U	ND(0.50) U	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	0.59	ND(0.50) U	ND(0.50) U
NH-C18-270_223	Low Flow	7/3/2013	ND(0.50) U	0.24 J/J	ND(5.0) U/J	ND(0.50) U/J	ND(0.50) U	0.63	ND(0.50) U	ND(0.50) U
NH-C18-270_223-dup-4	Low Flow	7/3/2013	ND(0.50) U	0.19 J/J	ND(5.0) U/J	ND(0.50) U/J	ND(0.50) U	0.57	ND(0.50) U	ND(0.50) U
NH-C18-365_308	Low Flow	12/7/2012	ND(0.50) U	2.5	ND(5.0) U	ND(0.50) U/J	0.13 J/J	70.	0.39 J/J	ND(0.50) U
NH-C18-365_308	Low Flow	7/16/2013	ND(0.50) U	0.50	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	64.	0.28 J/J	ND(0.50) U
NH-C19-290_233	Low Flow	12/21/2012	ND(0.50) U	2.0	ND(5.0) U	0.078 J/J	ND(0.50) U	60.	0.19 J/J	ND(0.50) U
NH-C19-290_233	PDB	1/11/2013	ND(0.50) U	2.1	2.1 J/J	ND(0.50) U	ND(0.50) U	78.	0.25 J/J	ND(0.50) U
NH-C19-290_233_DUP-5	PDB	1/11/2013	ND(0.50) U	2.1	2.3 J/J	ND(0.50) U	ND(0.50) U	79.	0.27 J/J	ND(0.50) U
NH-C19-290_233	Low Flow	6/27/2013	ND(0.50) U	1.3	ND(5.0) R	ND(0.50) U	ND(0.50) U	20.	0.076 J/J	ND(0.50) U
NH-C19-290_233	PDB	7/17/2013	ND(0.50) U	0.23 J/J	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	8.7	0.10 J/J	ND(0.50) U
NH-C19-290_243	PDB	1/11/2013	ND(0.50) U	1.6	2.3 J/J	ND(0.50) U	ND(0.50) U	76.	0.27 J/J	ND(0.50) U
NH-C19-290_243	PDB	7/17/2013	ND(0.50) U	0.25 J/J	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	9.3	0.10 J/J	ND(0.50) U
NH-C19-290_243-dup-7	PDB	7/17/2013	ND(0.50) U	0.26 J/J	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	8.8	0.092 J/J	ND(0.50) U
NH-C19-290_253	PDB	1/11/2013	ND(0.50) U	1.9	2.4 J/J	ND(0.50) U	ND(0.50) U	77. J	0.26 J/J	ND(0.50) U
NH-C19-290_253	PDB	7/17/2013	ND(0.50) U	0.55	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	15.	0.064 J/J	ND(0.50) U
NH-C19-290_263	PDB	1/11/2013	ND(0.50) U	1.7	2.1 J/J	ND(0.50) U	ND(0.50) U	77.	0.27 J/J	ND(0.50) U
NH-C19-290_263	PDB	7/17/2013	ND(0.50) U	2.1	ND(5.0) U	ND(0.50) U	ND(0.50) U	25.	0.072 J/J	ND(0.50) U
NH-C19-290_273	PDB	1/11/2013	ND(0.50) U	2.1	2.1 J/J	ND(0.50) U	ND(0.50) U	79.	0.26 J/J	ND(0.50) U
NH-C19-290_273	PDB	7/17/2013	ND(0.50) U	1.9	ND(5.0) U	ND(0.50) U	ND(0.50) U	23.	0.065 J/J	ND(0.50) U
NH-C19-290_283	PDB	1/11/2013	ND(0.50) U	2.0	2.3 J/J	ND(0.50) U	ND(0.50) U	82.	0.26 J/J	ND(0.50) U
NH-C19-290_283	PDB	7/17/2013	ND(0.50) U	2.2	ND(5.0) U	ND(0.50) U	ND(0.50) U	26.	0.071 J/J	ND(0.50) U
NH-C19-360_303	Low Flow	12/21/2012	ND(0.50) U	1.7	ND(5.0) U	0.13 J/J	ND(0.50) U	42.	0.28 J/J	ND(0.50) U
NH-C19-360_303	PDB	1/11/2013	ND(0.50) U	2.0	2.5 J/J	ND(0.50) U	ND(0.50) U	69. J	0.44 J/J	ND(0.50) U
NH-C19-360_303	Low Flow	6/27/2013	ND(0.							

TABLE A-1A

ORGANIC ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	Test Method	EPA 521					EPA 522	EPA 524M-TCP		EPA 524.2					
		Analyte/ Units:	N-Nitrosodiethylamine (ng/L)	N-Nitrosodimethylamine (ng/L)	N-Nitrosodi-n-butylamine (ng/L)	N-Nitrosodi-n-propylamine (ng/L)	N-Nitrosomorpholine (ng/L)	1,4-Dioxane (µg/L)	1,2,3-Trichloropropane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1,2-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	1,1-Dichloroethene (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,2-Dichlorobenzene (µg/L)	
		Sample Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
NH-C20-380_322	Low Flow	12/19/2012	ND(2.0) U	ND(2.0) U/J	ND(2.0) U/J	ND(2.0) U	ND(2.4) U	1.6	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.18 J/J	0.15 J/J	ND(0.50) U	ND(0.50) U	
NH-C20-380_322	Low Flow	7/10/2013	0.71 J	ND(2.0) U/J	ND(2.0) U	ND(2.0) U	2.1 J	1.4	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.26 J/J	0.069 J/J	ND(0.50) U	ND(0.50) U	
NH-C21-260_213	Low Flow	1/3/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	4.1	0.79	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.25 J/J	ND(0.50) U	ND(0.50) U	
NH-C21-260_213_DUP-3	Low Flow	1/3/2013	ND(2.0) U	ND(2.0) U/J	ND(2.0) U/J	ND(2.0) U	2.7	0.86	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.26 J/J	ND(0.50) U	ND(0.50) U	
NH-C21-260_213	Low Flow	7/10/2013	0.88 J	0.73 J	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(0.16) U	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.11 J/J	ND(0.50) U	ND(0.50) U	
NH-C21-340_283	Low Flow	1/4/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	2.7	2.1	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.61	0.30 J/J	0.045 J/J	ND(0.50) U
NH-C21-340_283	Low Flow	7/9/2013	ND(2.0) U	ND(2.0) U/J	2.8 J/BS-H	ND(2.0) U	4.0	1.3	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.24 J/J	0.13 J/J	ND(0.50) U	ND(0.50) U
NH-C23-310_253	Low Flow	12/28/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U/J	ND(2.0) U	2.4	2.7	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.30 J/J	ND(0.50) U	ND(0.50) U	
NH-C23-310_253	PDB	1/11/2013	NT	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.27 J/J	0.052 J/J	ND(0.50) U	ND(0.50) U
NH-C23-310_253	Low Flow	7/1/2013	ND(2.0) U	4.0	ND(2.0) U	ND(2.0) U	1.2 J/J	ND(0.36) U	ND(0.005) U	0.57	ND(0.50) U	0.10 J/J	0.51	ND(0.50) U	ND(0.50) U	
NH-C23-310_253	PDB	7/17/2013	NT	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.056 J/J	0.58	ND(0.50) U	ND(0.50) U
NH-C23-310_263	PDB	1/11/2013	NT	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.31 J/J	0.077 J/J	ND(0.50) U	ND(0.50) U
NH-C23-310_263	PDB	7/17/2013	NT	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.87	ND(0.50) U	ND(0.50) U	
NH-C23-310_273	PDB	1/11/2013	NT	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.29 J/J	0.084 J/J	ND(0.50) U	ND(0.50) U
NH-C23-310_273	PDB	7/17/2013	NT	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.31 J/J	ND(0.50) U	ND(0.50) U	
NH-C23-310_283	PDB	1/11/2013	NT	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.064 J/J	0.37 J/J	0.089 J/J	ND(0.50) U
NH-C23-310_283	PDB	7/17/2013	NT	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.26 J/J	ND(0.50) U	0.97	ND(0.50) U
NH-C23-310_293	PDB	1/11/2013	NT	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.33 J/J	ND(0.50) U	ND(0.50) U	
NH-C23-310_293	PDB	7/17/2013	NT	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.34 J/J	ND(0.50) U	1.2	ND(0.50) U
NH-C23-310_303	PDB	1/11/2013	NT	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.14 J/J	0.30 J/J	0.12 J/J	ND(0.50) U
NH-C23-310_303	PDB	7/17/2013	NT	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.32 J/J	ND(0.50) U	1.3	ND(0.50) U
NH-C24-305_247	Low Flow	12/18/2012	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0) U/J	0.89	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.27 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C24-305_247	Low Flow	6/21/2013	0.81 J/J	2.2 J	ND(2.0) U	ND(2.0) U	1.1 J/J	0.41	ND(0.005) U	0.19 J/J	ND(0.50) U	0.053 J/J	0.52	ND(0.50) U	ND(0.50) U	
NHE-1_240	Low Flow	12/11/2012	ND(2.0) U	ND(2.0) U/J	ND(2.0) U/J	ND(2.0) U	77.	3.2	ND(0.005) U	0.21 J/J	ND(0.50) U	0.90	0.30 J/J	ND(0.50) U	ND(0.50) U	
NHE-1_240	Low Flow	7/11/2013	0.70 J	ND(2.0) U/J	ND(2.0) U	ND(2.0) U	140.	1.1	ND(0.005) U	0.22 J/J	ND(0.50) U	1.6	0.25 J/J	ND(0.50) U	ND(0.50) U	

TABLE A-1A

ORGANIC ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California



Sample	Sampling Method	Test Method	EPA 524.2												
			1,2-Dichloroethane (µg/L)	1,2-Dichloropropane (µg/L)	1,3,5-Trimethylbenzene (µg/L)	2-Butanone (µg/L)	Acetone (µg/L)	Benzene (µg/L)	Bromodichloromethane (µg/L)	Carbon disulfide (µg/L)	Carbon tetrachloride (µg/L)	Chlorobenzene (µg/L)	Chloroethane (µg/L)	Chloroform (µg/L)	Chloromethane (µg/L)
		Sample Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
NH-C20-380_322	Low Flow	12/19/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C20-380_322	Low Flow	7/10/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J/J	0.53	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C21-260_213	Low Flow	1/3/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	0.13 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C21-260_213_DUP-3	Low Flow	1/3/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	0.13 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C21-260_213	Low Flow	7/10/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J	ND(0.50) U/J	0.091 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	8.4
NH-C21-340_283	Low Flow	1/4/2013	0.18 J/J	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.79	ND(0.50) U
NH-C21-340_283	Low Flow	7/9/2013	0.16 JJ	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J/J	ND(0.50) U/J	0.13 JJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	5.2	ND(0.50) U/J
NH-C23-310_253	Low Flow	12/28/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	1.5	ND(0.50) U
NH-C23-310_253	PDB	1/11/2013	0.44 JJ	ND(0.50) U	ND(0.50) U	ND(2.0) U	2.2 R/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	1.0	0.073 JJ
NH-C23-310_253	Low Flow	7/1/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U/J	ND(10.) U/J/J	ND(0.50) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.21 JJ	ND(0.50) U/J/B,J
NH-C23-310_253	PDB	7/17/2013	0.29 JJ	ND(0.50) U	ND(0.50) U	ND(2.0) U/J	ND(10.) U/J/J	0.031 JJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.12 JJ	ND(0.50) U/B,J
NH-C23-310_263	PDB	1/11/2013	0.14 JJ	ND(0.50) U	ND(0.50) U	ND(2.0) U	1.5 R/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	1.3	ND(0.50) U
NH-C23-310_263	PDB	7/17/2013	0.098 JJ	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J/J	0.035 JJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.094 JJ	ND(0.50) U
NH-C23-310_273	PDB	1/11/2013	0.10 JJ	ND(0.50) U	ND(0.50) U	ND(2.0) U	2.6 R/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	1.2	0.05 JJ
NH-C23-310_273	PDB	7/17/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U/J	ND(10.) U/J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.11 JJ	ND(0.50) U/B,J
NH-C23-310_283	PDB	1/11/2013	0.15 JJ	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	1.3	ND(0.50) U
NH-C23-310_283	PDB	7/17/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U/J	ND(10.) U/J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.089 JJ	ND(0.50) U/B,J
NH-C23-310_293	PDB	1/11/2013	0.14 JJ	ND(0.50) U	ND(0.50) U	ND(2.0) U	1.7 R/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	1.1	0.056 JJ
NH-C23-310_293	PDB	7/17/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U/J	ND(10.) U/J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.11 JJ	ND(0.50) U/B,J
NH-C23-310_303	PDB	1/11/2013	0.13 JJ	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	0.087 JJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	1.3	ND(0.50) U
NH-C23-310_303	PDB	7/17/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U/J	ND(10.) U/J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.11 JJ	ND(0.50) U/B,J
NH-C24-305_247	Low Flow	12/18/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.22 JJ	ND(0.50) U	ND(0.50) U	0.33 JJ	ND(0.50) U/J
NH-C24-305_247	Low Flow	6/21/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.24 JJ	ND(0.50) U/B,J
NHE-1_240	Low Flow	12/11/2012	0.23 JJ	ND(0.50) U	ND(0.50) U	ND(2.0) U	3.3 R/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.72	ND(0.50) U/J
NHE-1_240	Low Flow	7/11/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	1.0	ND(0.50) U

TABLE A-1A

ORGANIC ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	Test Method	EPA 524.2													
		Analyte/ Units:	cis-1,2-Dichloroethene (µg/L)	Dibromochloromethane (µg/L)	Dichlorodifluoromethane (µg/L)	Diethyl Ether (µg/L)	Ethanol (µg/L)	Ethylbenzene (µg/L)	Freon 113 (µg/L)	Iodomethane (µg/L)	Methylene chloride (µg/L)	Naphthalene (µg/L)	n-Butylbenzene (µg/L)	o-Xylene (µg/L)	p-Isopropyltoluene (µg/L)	
		Sample Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual		
NH-C20-380_322	Low Flow	12/19/2012	1.2	ND(0.50) U	0.43 J/J	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U		
NH-C20-380_322	Low Flow	7/10/2013	1.6	ND(0.50) U	0.48 J/J	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	0.12 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C21-260_213	Low Flow	1/3/2013	0.087 J/J	ND(0.50) U	0.88	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.043 J/J	ND(0.50) U	
NH-C21-260_213_DUP-3	Low Flow	1/3/2013	ND(0.50) U	ND(0.50) U	1.0	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C21-260_213	Low Flow	7/10/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C21-340_283	Low Flow	1/4/2013	3.6	ND(0.50) U	1.5	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) UJ	ND(0.50) U	0.076 J/J	ND(0.50) U	
NH-C21-340_283	Low Flow	7/9/2013	0.70	ND(0.50) U	2.0	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	0.18 J/J	ND(0.50) U/B,J	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	
NH-C23-310_253	Low Flow	12/28/2012	1.8	ND(0.50) U	0.43 J/J	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C23-310_253	PDB	1/11/2013	1.8	ND(0.50) U	0.30 J/J	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	0.22 J/J	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U
NH-C23-310_253	Low Flow	7/1/2013	0.31 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U/J	ND(0.50) U/B,J	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	
NH-C23-310_253	PDB	7/17/2013	ND(0.50) U	ND(0.50) UJ	0.35 J/J	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C23-310_263	PDB	1/11/2013	2.2	ND(0.50) U	0.40 J/J	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C23-310_263	PDB	7/17/2013	ND(0.50) U	ND(0.50) UJ	0.21 J/J	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C23-310_273	PDB	1/11/2013	2.1	ND(0.50) U	0.33 J/J	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	0.21 J/J	ND(0.50) U/B,J	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C23-310_273	PDB	7/17/2013	ND(0.50) U	ND(0.50) UJ	0.18 J/J	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C23-310_283	PDB	1/11/2013	2.3	ND(0.50) U	0.36 J/J	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C23-310_283	PDB	7/17/2013	ND(0.50) U	ND(0.50) UJ	0.17 J/J	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C23-310_293	PDB	1/11/2013	2.2	ND(0.50) U	0.49 J/J	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	
NH-C23-310_293	PDB	7/17/2013	ND(0.50) U	ND(0.50) UJ	0.19 J/J	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C23-310_303	PDB	1/11/2013	1.7	ND(0.50) U	0.28 J/J	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C23-310_303	PDB	7/17/2013	ND(0.50) U	ND(0.50) UJ	0.18 J/J	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C24-305_247	Low Flow	12/18/2012	0.23 J/J	ND(0.50) U	1.4 J	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	
NH-C24-305_247	Low Flow	6/21/2013	0.047 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) R	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NHE-1_240	Low Flow	12/11/2012	0.53	ND(0.50) U	0.36 J/J	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	
NHE-1_240	Low Flow	7/11/2013	1.2	ND(0.50) U	ND(0.50) UJ	ND(0.50) R	ND(50.) R	ND(0.50) U	0.19 J/J	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	

TABLE A-1A

ORGANIC ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	Test Method	EPA 524.2							
			Analyte/ Units:	tert-Butyl methyl ether (µg/L)	Tetrachloroethene (µg/L)	Tetrahydrofuran (µg/L)	Toluene (µg/L)	trans-1,2-Dichloroethene (µg/L)	Trichloroethene (µg/L)	Trichlorofluoromethane (µg/L)
		Sample Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
NH-C20-380_322	Low Flow	12/19/2012	ND(0.50) U	1.3	ND(5.0) U	ND(0.50) U/B,J	ND(0.50) U	46.	0.12 J/J	ND(0.50) U
NH-C20-380_322	Low Flow	7/10/2013	ND(0.50) U	0.62	ND(5.0) UJ	0.53	ND(0.50) U	21.	0.077 J/J	ND(0.50) U
NH-C21-260_213	Low Flow	1/3/2013	ND(0.50) U	0.76	ND(5.0) U	0.078 J/J	ND(0.50) U	23.	ND(0.50) U	ND(0.50) U
NH-C21-260_213 DUP-3	Low Flow	1/3/2013	ND(0.50) U	0.70	ND(5.0) U	0.086 J/J	ND(0.50) U	24.	0.08 J/J	ND(0.50) U
NH-C21-260_213	Low Flow	7/10/2013	ND(0.50) U	2.4	ND(5.0) UJ	ND(0.50) U/J	ND(0.50) U	40.	ND(0.50) U	ND(0.50) U
NH-C21-340_283	Low Flow	1/4/2013	ND(0.50) U	0.51	ND(5.0) U	ND(0.50) U/B,J	ND(0.50) U	15.	ND(0.50) U	ND(0.50) U
NH-C21-340_283	Low Flow	7/9/2013	ND(0.50) U	1.2	ND(5.0) UJ	0.057 J/J	0.067 JJ	95.	0.30 J/J	ND(0.50) U
NH-C23-310_253	Low Flow	12/28/2012	ND(0.50) U	1.7	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	1.9	ND(0.50) U	ND(0.50) U
NH-C23-310_253	PDB	1/11/2013	ND(0.50) U	1.2	2.3 JJ	ND(0.50) U	ND(0.50) U	1.7	ND(0.50) U	ND(0.50) U
NH-C23-310_253	Low Flow	7/1/2013	ND(0.50) U	0.69	ND(5.0) UJ	ND(0.50) U/J	ND(0.50) U	1.1	0.24 J/J	ND(0.50) U
NH-C23-310_253	PDB	7/17/2013	ND(0.50) U	0.25 J/J	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	1.3	0.21 J/J	ND(0.50) U
NH-C23-310_263	PDB	1/11/2013	ND(0.50) U	2.1	2.4 JJ	ND(0.50) U	ND(0.50) U	2.4	ND(0.50) U	ND(0.50) U
NH-C23-310_263	PDB	7/17/2013	ND(0.50) U	0.25 J/J	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	1.8	0.30 J/J	ND(0.50) U
NH-C23-310_273	PDB	1/11/2013	ND(0.50) U	2.4	2.5 JJ	ND(0.50) U	ND(0.50) U	2.2	ND(0.50) U	ND(0.50) U
NH-C23-310_273	PDB	7/17/2013	ND(0.50) U	0.36 J/J	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	2.1	0.36 J/J	ND(0.50) U
NH-C23-310_283	PDB	1/11/2013	ND(0.50) U	2.5	2.2 JJ	ND(0.50) U	ND(0.50) U	2.2	ND(0.50) U	ND(0.50) U
NH-C23-310_283	PDB	7/17/2013	ND(0.50) U	0.37 J/J	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	2.0	0.35 J/J	ND(0.50) U
NH-C23-310_293	PDB	1/11/2013	ND(0.50) U	2.4	2.4 JJ	ND(0.50) U	ND(0.50) U	2.5	ND(0.50) U	ND(0.50) U
NH-C23-310_293	PDB	7/17/2013	ND(0.50) U	0.75	ND(5.0) U	ND(0.50) U	ND(0.50) U	3.2	0.43 J/J	ND(0.50) U
NH-C23-310_303	PDB	1/11/2013	ND(0.50) U	2.3	2.3 JJ	ND(0.50) U	ND(0.50) U	2.0	ND(0.50) U	ND(0.50) U
NH-C23-310_303	PDB	7/17/2013	ND(0.50) U	0.87	ND(5.0) U	ND(0.50) U	ND(0.50) U	3.5	0.43 J/J	ND(0.50) U
NH-C24-305_247	Low Flow	12/18/2012	ND(0.50) U	1.6	ND(5.0) U	ND(0.50) U/B,J	ND(0.50) U	0.24 J/J	0.10 J/J	ND(0.50) U
NH-C24-305_247	Low Flow	6/21/2013	0.066 J/J	4.9	ND(5.0) R	ND(0.50) U/J	ND(0.50) U	0.84	ND(0.50) U	ND(0.50) U
NHE-1_240	Low Flow	12/11/2012	ND(0.50) U	2.6	ND(5.0) U	0.72	ND(0.50) U	38.	0.38 J/J	ND(0.50) U
NHE-1_240	Low Flow	7/11/2013	0.22 J/J	4.8	ND(5.0) UJ	ND(0.50) U	ND(0.50) U	71.	0.23 J/J	ND(0.50) U

TABLE A-1A

ORGANIC ANALYTICAL RESULTS - A-ZONE

Phase 1 Pre-design Investigation, NHOU Second Interim Remedy
Los Angeles County, California

Abbreviations

PDB = Passive diffusion bag
DIL = Sample analyzed at dilution
EPA = The United States Environmental Protection Agency
ng/L = Nanogram per liter
ND = Not Detected at the specific reporting level in parentheses
NT = Not Tested
µg/L = Microgram per liter

Validation Qualifiers

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias.
R = The sample results are rejected. The presence or absence of the analyte cannot be verified. Rejected results are not usable for any purpose.
U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ = The analyte was analyzed for but was not detected above the reported value. The reported quantitation limit is approximate.

Laboratory Qualifiers

B = Compound is also detected in the laboratory method blank.
J = Result is detected below the reporting limit or is an estimated concentration.

TABLE A-1B

ORGANIC ANALYTICAL RESULTS - B-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	Test Method	EPA 521					EPA 522	EPA 524M-TCP	EPA 524.2						
			N-Nitrosodiethylamine (ng/L)	N-Nitrosodimethylamine (ng/L)	N-Nitrosodi-n-butylamine (ng/L)	N-Nitrosodi-n-propylamine (ng/L)	N-Nitrosomorpholine (ng/L)			1,4-Dioxane (µg/L)	1,2,3-Trichloropropane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1,2-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	1,1-Dichloroethene (µg/L)	
		Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
4909C_392	Low Flow	1/7/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.72 J/J	ND(0.13) U	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
4909C_392	Low Flow	7/12/2013	ND(2.0) U	ND(2.0) UJ	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.49	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.28 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	
4909C_398	Low Flow	1/7/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(0.14) U	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
4909C_398	Low Flow	7/12/2013	ND(2.0) U	ND(2.0) UJ	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.49	ND(0.005) U	0.10 J/J	ND(0.50) U	0.23 J/J	ND(0.50) U	0.14 J/J	ND(0.50) U	ND(0.50) U
4918A_483	Low Flow	12/20/2012	1.1 J/J	ND(2.0) U	ND(2.0) UJ	ND(2.0) U	2.4	8.7	ND(0.005) U	2.8	ND(0.50) U	1.5	24.	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-18B_402	Low Flow	12/5/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.67 J/J	ND(0.38) U	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-18B_402	Low Flow	6/19/2013	0.84 J/J	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.58 J/J	0.63	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-18B_402-dup-1	Low Flow	6/19/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.53 J/J	0.43	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-18B_405	Low Flow	12/6/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(0.1) J	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-18B_405_DUP-1	Low Flow	12/6/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.54 J/J	0.39	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-18B_405	Low Flow	6/19/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.62 J/J	0.48	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-19B_401.5	Low Flow	12/13/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(0.082) U	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-19B_401.5_DUP-2	Low Flow	12/13/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.51 J/J	ND(0.07) U/J	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-19B_401.5	Low Flow	6/24/2013	ND(2.0) U	0.36 J/J	ND(2.0) U/J	ND(2.0) U	ND(2.0) U	ND(0.26) U	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-19B_405.5	Low Flow	12/13/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.56 J/J	ND(0.10) U	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
GW-19B_405.5	Low Flow	6/19/2013	0.81 J/J	ND(2.0) U	0.72 J/J	ND(2.0) U	ND(2.0) U	0.58 J/J	ND(0.29) U	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
LA1-CW05_339	Low Flow	12/10/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	25.	1.8	0.0026 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.11 J/J	ND(0.50) U	ND(0.50) U
LA1-CW05_339	Low Flow	7/15/2013	ND(2.0) U	ND(2.0) UJ	ND(4.0) U	ND(4.0) U	ND(4.0) U	21. J	2.0	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.034 J/J	0.073 J/J	ND(0.50) U	ND(0.50) U
LA1-CW05_356	Low Flow	12/10/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	23.	1.9 J	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.10 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U
LA1-CW05_356	Low Flow	7/15/2013	ND(2.0) U	ND(2.0) UJ	ND(2.0) U	ND(2.0) U	ND(2.0) U	25.	1.9	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.059 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U
LA1-CW05_356-dup-6	Low Flow	7/15/2013	2.9 J	ND(2.0) UJ	ND(2.0) U	ND(2.0) U	ND(2.0) U	17.	1.9	ND(0.005) U	ND(0.50) U	ND(0.50) U	0.039 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C01-450_403	Low Flow	12/27/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.99 J/J	ND(0.005) U	4.4	1.8	ND(0.005) U	2.6	ND(0.50) U	0.34 J/J	13.
NH-C01-450_403	Low Flow	7/26/2013	ND(2.0) U	ND(2.0) UJ	ND(2.0) U	ND(2.0) U	ND(2.0) U	2.2	ND(0.005) U	2.4	ND(0.50) U	0.39 J/J	14.	ND(0.50) U	0.033 J/J	
NH-C01-450_447	Low Flow	12/27/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	2.8	1.9	ND(0.005) U	1.4	ND(0.50) U	0.34 J/J	6.5	0.041 J/J	ND(0.50) U
NH-C01-450_447	Low Flow	7/26/2013	ND(2.0) U	ND(2.0) UJ	ND(2.0) U	ND(2.0) U	ND(2.0) U	2.0	ND(0.005) U	2.2	ND(0.50) U	0.38 J/J	16.	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C05-460_425	Low Flow	7/26/2013	ND(2.0) U	1.0 J	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.05 J/J	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C10-360_340	Low Flow	12/14/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	1.0 J/J	1.5	ND(0.005) U	ND(0.50) U	ND(0.50) U	1.3	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C10-360_340	Low Flow	6/25/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	1.1 J/J	1.6	ND(0.005) U	ND(0.50) U	ND(0.50) U	1.1	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C12-360_343	Low Flow	12/26/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	2.9	0.86	ND(0.005) U	ND(0.50) U	ND(0.50) U	1.4	0.10 J/J	ND(0.50) U	ND(0.50) U
NH-C12-360_343	Low Flow	6/24/2013	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.67 J/J	0.92	ND(0.005) U	ND(0.50) U	ND(0.50) U	1.7	0.082 J/J	ND(0.50) U	ND(0.50) U
NH-C13-385_363	Low Flow	12/12/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	0.59 J/J	ND(0.1							

TABLE A-1B

ORGANIC ANALYTICAL RESULTS - B-ZONE

Pre-Design Investigation, NHOU Second Interim Remedy
Los Angeles County, California



Sample	Sampling Method	Test Method	EPA 524.2															
		Analyte/ Units:	1,2-Dichloroethane (µg/L)	1,2-Dichloropropane (µg/L)	1,3,5-Trimethylbenzene (µg/L)	2-Butanone (µg/L)	Acetone (µg/L)	Benzene (µg/L)	Bromodichloromethane (µg/L)	Carbon disulfide (µg/L)	Carbon tetrachloride (µg/L)	Chlorobenzene (µg/L)	Chloroethane (µg/L)	Chloroform (µg/L)	Chloromethane (µg/L)	cis-1,2-Dichloroethene (µg/L)	Dibromochloromethane (µg/L)	Dichlorodifluoromethane (µg/L)
		Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
4909C_392	Low Flow	1/7/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
4909C_392	Low Flow	7/12/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) UJ/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.52	ND(0.50) U	ND(0.50) U
4909C_398	Low Flow	1/7/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.062 J/J
4909C_398	Low Flow	7/12/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) UJ/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.66
4918A_483	Low Flow	12/20/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.39 J/J
GW-18B_402	Low Flow	12/5/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	1.4 R/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.15 J/J
GW-18B_402	Low Flow	6/19/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.058 J/J
GW-18B_402-dup-1	Low Flow	6/19/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.16 J/J
GW-18B_405	Low Flow	12/6/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.072 J/J
GW-18B_405_DUP-1	Low Flow	12/6/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	1.5 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.036 J/J
GW-18B_405	Low Flow	6/19/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.08 J/J
GW-19B_401.5	Low Flow	12/13/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	1.5 R/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.045 J/J
GW-19B_401.5_DUP-2	Low Flow	12/13/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	3.5 R/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.086 J/J
GW-19B_401.5	Low Flow	6/24/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.093 J/J
GW-19B_405.5	Low Flow	12/13/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	2.0 R/J	0.037 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.14 J/J
GW-19B_405.5	Low Flow	6/19/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.098 J/J
LA1-CW05_339	Low Flow	12/10/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.061 J/J
LA1-CW05_339	Low Flow	7/15/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(10.) UJ/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.043 J/J
LA1-CW05_356	Low Flow	12/10/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.022 J/J
LA1-CW05_356	Low Flow	7/15/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(10.) UJ/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.052 J/J
LA1-CW05_356-dup-6	Low Flow	7/15/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(10.) UJ/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.022 J/J
NH-C01-450_403	Low Flow	12/27/2012	0.11 J/J	ND(0.50) U	ND(0.50) U	ND(2.0) U	1.8 R/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.85
NH-C01-450_403	Low Flow	7/26/2013	0.14 J/J	0.081 J/J	ND(0.50) U	ND(2.0) UJ	ND(10.) UJ/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.95
NH-C01-450_447	Low Flow	12/27/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	2.8 R/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.81
NH-C01-450_447	Low Flow	7/26/2013	0.14 J/J	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(10.) UJ/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.48 J/J
NH-C05-460_425	Low Flow	7/26/2013	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(10.) UJ/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U
NH-C10-360_340	Low Flow	12/14/2012	0.34 J/J	0.18 J/J	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	7.6
NH-C10-360_340	Low Flow	6/25/2013	0.38 J/J</td															

TABLE A-1B

ORGANIC ANALYTICAL RESULTS - B-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	EPA 524.2																			
		Test Method		Analyte/ Units:		Diethyl Ether (µg/L)	Ethanol (µg/L)	Ethylbenzene (µg/L)	Freon 113 (µg/L)	Iodomethane (µg/L)	Methylene chloride (µg/L)	Naphthalene (µg/L)	n-Butylbenzene (µg/L)	o-Xylene (µg/L)	p-Isopropyltoluene (µg/L)	tert-Butyl methyl ether (µg/L)	Tetrachloroethene (µg/L)	Tetrahydrofuran (µg/L)	Toluene (µg/L)	trans-1,2-Dichloroethene (µg/L)	Trichloroethene (µg/L)
		Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual			
4909C_392	Low Flow	1/7/2013	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.18 JJ	ND(5.0) U	ND(0.50) U/B,J	ND(0.50) U	2.7	
4909C_392	Low Flow	7/12/2013	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.23 JJ	ND(5.0) UJ	ND(0.50) U	ND(0.50) U	10.	
4909C_398	Low Flow	1/7/2013	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.37 JJ	ND(5.0) U	ND(0.50) U/B,J	ND(0.50) U	3.6	
4909C_398	Low Flow	7/12/2013	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.52	ND(5.0) UJ	ND(0.50) U	ND(0.50) U	18.	
4918A_483	Low Flow	12/20/2012	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	1.1 JJ	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	2.6	
GW-18B_402	Low Flow	12/5/2012	ND(0.50) U	ND(50.) R	0.034 JJ	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.31 JJ	ND(5.0) U	ND(0.50) U	ND(0.50) U	8.4	
GW-18B_402	Low Flow	6/19/2013	ND(0.50) U	ND(50.) R	ND(0.50) U	0.068 JJ	ND(0.50) U/J	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.30 JJ	ND(5.0) R	ND(0.50) U	ND(0.50) U	11.	
GW-18B_402-dup-1	Low Flow	6/19/2013	ND(0.50) U	ND(50.) R	ND(0.50) U	0.07 JJ	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.34 JJ	ND(5.0) R	ND(0.50) U	ND(0.50) U	11.	
GW-18B_405	Low Flow	12/6/2012	ND(0.50) U	ND(50.) R	0.039 JJ	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.056 JJ	ND(5.0) U	ND(0.50) U	ND(0.50) U	7.3	
GW-18B_405_DUP-1	Low Flow	12/6/2012	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.053 JJ	ND(5.0) U	ND(0.50) U	ND(0.50) U	7.4	
GW-18B_405	Low Flow	6/19/2013	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(2.0) UJ	ND(0.53) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.29 JJ	ND(5.0) R	ND(0.50) U	ND(0.50) U	11.	
GW-18B_401.5	Low Flow	12/13/2012	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.05 JJ	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	0.42 JJ	
GW-18B_401.5_DUP-2	Low Flow	12/13/2012	ND(0.50) U	ND(50.) R	0.038 JJ	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.058 JJ	ND(5.0) U	ND(0.50) U	ND(0.50) U	0.37 JJ	
GW-19B_401.5	Low Flow	6/24/2013	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.19 JJ	ND(5.0) R	ND(0.50) U/J	ND(0.50) U	2.9	
GW-19B_405.5	Low Flow	12/13/2012	ND(0.50) U	ND(50.) R	0.045 JJ	ND(0.50) U	ND(2.0) U	1.2 JJ	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.071 JJ	ND(5.0) U	ND(0.50) U	ND(0.50) U	0.39 JJ	
GW-19B_405.5	Low Flow	6/19/2013	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.25 JJ	ND(5.0) R	0.042 JJ	ND(0.50) U	4.0	
LA1-CW05_339	Low Flow	12/10/2012	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	6.0	ND(5.0) U	0.12 JJ	ND(0.50) U	2.0	
LA1-CW05_339	Low Flow	7/15/2013	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	5.4	ND(5.0) U	ND(0.50) U	ND(0.50) U	1.8	
LA1-CW05_356	Low Flow	12/10/2012	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	19.	ND(5.0) U	0.079 JJ	ND(0.50) U	2.5	
LA1-CW05_356	Low Flow	7/15/2013	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	6.2	ND(5.0) U	ND(0.50) U	ND(0.50) U	1.8	
LA1-CW05_356-dup-6	Low Flow	7/15/2013	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	6.2	ND(5.0) U	ND(0.50) U	ND(0.50) U	1.9	
NH-C01-450_403	Low Flow	12/27/2012	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.63	ND(5.0) U	0.52 JJ	ND(0.50) U/J	ND(0.50) U	2.2
NH-C01-450_403	Low Flow	7/26/2013	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(2.0) UJ	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.98	0.73 JJ	ND(0.50) U	ND(0.50) U	2.8	
NH-C01-450_447	Low Flow	12/27/2012	ND(0.50) U	ND(50.) R	0.04 JJ	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.083 JJ	ND(0.50) U	ND(0.50) U	ND(0.50) U		

TABLE A-1B

ORGANIC ANALYTICAL RESULTS - B-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	Test Method	EPA 524.2			
		Analyte/ Units:	Trichlorofluoromethane ($\mu\text{g}/\text{L}$)	Vinyl chloride ($\mu\text{g}/\text{L}$)		
	Date	Value	Qual	Value	Qual	
4909C_392	Low Flow	1/7/2013	ND(0.50)	U	ND(0.50)	U
4909C_392	Low Flow	7/12/2013	ND(0.50)	U	ND(0.50)	U
4909C_398	Low Flow	1/7/2013	ND(0.50)	U	ND(0.50)	U
4909C_398	Low Flow	7/12/2013	ND(0.50)	U	ND(0.50)	U
4918A_483	Low Flow	12/20/2012	0.69		ND(0.50)	U
GW-18B_402	Low Flow	12/5/2012	ND(0.50)	U	ND(0.50)	U
GW-18B_402	Low Flow	6/19/2013	ND(0.50)	U	ND(0.50)	U
GW-18B_402-dup-1	Low Flow	6/19/2013	ND(0.50)	U	ND(0.50)	U
GW-18B_405	Low Flow	12/6/2012	ND(0.50)	U	ND(0.50)	U
GW-18B_405_DUP-1	Low Flow	12/6/2012	ND(0.50)	U	ND(0.50)	U
GW-18B_405	Low Flow	6/19/2013	ND(0.50)	U	ND(0.50)	U
GW-19B_401.5	Low Flow	12/13/2012	ND(0.50)	U	ND(0.50)	U
GW-19B_401.5_DUP-2	Low Flow	12/13/2012	ND(0.50)	U	ND(0.50)	U
GW-19B_401.5	Low Flow	6/24/2013	ND(0.50)	U	ND(0.50)	U
GW-19B_405.5	Low Flow	12/13/2012	ND(0.50)	U	ND(0.50)	U
GW-19B_405.5	Low Flow	6/19/2013	ND(0.50)	U	ND(0.50)	U
LA1-CW05_339	Low Flow	12/10/2012	ND(0.50)	U	ND(0.50)	U
LA1-CW05_339	Low Flow	7/15/2013	ND(0.50)	U	ND(0.50)	U
LA1-CW05_356	Low Flow	12/10/2012	ND(0.50)	U	ND(0.50)	U
LA1-CW05_356	Low Flow	7/15/2013	ND(0.50)	U	ND(0.50)	U
LA1-CW05_356-dup-6	Low Flow	7/15/2013	ND(0.50)	U	ND(0.50)	U
NH-C01-450_403	Low Flow	12/27/2012	0.67		ND(0.50)	U
NH-C01-450_403	Low Flow	7/26/2013	0.71		ND(0.50)	U
NH-C01-450_447	Low Flow	12/27/2012	0.21 J/J		ND(0.50)	U
NH-C01-450_447	Low Flow	7/26/2013	0.67		ND(0.50)	U
NH-C05-460_425	Low Flow	7/26/2013	ND(0.50)	U	ND(0.50)	U
NH-C10-360_340	Low Flow	12/14/2012	0.25 J/J		ND(0.50)	U
NH-C10-360_340	Low Flow	6/25/2013	0.23 J/J		ND(0.50)	U
NH-C12-360_343	Low Flow	12/26/2012	0.16 J/J		ND(0.50)	U
NH-C12-360_343	Low Flow	6/24/2013	0.15 J/J		ND(0.50)	U
NH-C13-385_363	Low Flow	12/12/2012	ND(0.50)	U	ND(0.50)	U
NH-C13-385_363	Low Flow	7/11/2013	ND(0.50)	U	ND(0.50)	U
NH-C15-330_293	Low Flow	7/16/2013	ND(0.50)	U	ND(0.50)	U
NH-C15-330_327	Low Flow	7/17/2013	ND(0.50)	U	ND(0.50)	U
NH-C16-390_375	Low Flow	12/4/2012	1.2		ND(0.50)	U
NH-C16-390_375	Low Flow	7/8/2013	0.96		ND(0.50)	U
NH-C16-390_375-dup-5	Low Flow	7/8/2013	0.91		ND(0.50)	U
NH-C17-339_313	Low Flow	1/2/2013	0.22 J/J		ND(0.50)	U
NH-C17-339_313	Low Flow	7/2/2013	0.15 J/J		ND(0.50)	U
NH-C18-365_348	Low Flow	12/7/2012	0.12 J/J		ND(0.50)	U
NH-C18-365_348	Low Flow	7/15/2013	0.24 J/J		ND(0.50)	U
NH-C19-360_343	PDB	1/11/2013	0.19 J/J		ND(0.50)	U
NH-C19-360_343_DUP-6	PDB	1/11/2013	0.21 J/J		ND(0.50)	U
NH-C19-360_343	PDB	7/17/2013	0.20 J/J		ND(0.50)	U
NH-C19-360_349	Low Flow	12/21/2012	0.24 J/J		ND(0.50)	U
NH-C19-360_349	Low Flow	6/27/2013	0.15 J/J		ND(0.50)	U
NH-C19-360_353	PDB	1/11/2013	0.18 J/J		ND(0.50)	U
NH-C19-360_353	PDB	7/17/2013	0.19 J/J		ND(0.50)	U
NH-C20-380_361	Low Flow	12/19/2012	0.098 J/J		ND(0.50)	U
NH-C20-380_361	Low Flow	7/10/2013	0.15 J/J		ND(0.50)	U
NH-C21-340_325	Low Flow	1/4/2013	ND(0.50)	U	ND(0.50)	U
NH-C21-340_325_DUP-4	Low Flow	1/4/2013	ND(0.50)	U	ND(0.50)	U
NH-C21-340_325	Low Flow	7/9/2013	0.19 J/J		ND(0.50)	U
NH-C23-400_343	Low Flow	12/28/2012	0.31 J/J		ND(0.50)	U
NH-C23-400_343	PDB	1/11/2013	0.15 J/J		ND(0.50)	U
NH-C23-400_343	Low Flow	7/1/2013	0.26 J/J		ND(0.50)	U
NH-C23-400_343	PDB	7/17/2013	ND(0.50)	U	ND(0.50)	U
NH-C23-400_353	PDB	1/11/2013	0.37 J/J		ND(0.50)	U
NH-C23-400_353	PDB	7/17/2013	ND(0.50)	U	ND(0.50)	U
NH-C23-400_363	PDB	1/11/2013	0.35 J/J		ND(0.50)	U
NH-C23-400_363	PDB	7/17/2013	ND(0.50)	U	ND(0.50)	U
NH-C23-400_373	PDB	1/11/2013	0.24 J/J		ND(0.50)	U
NH-C23-400_373	PDB	7/17/2013	ND(0.50)	U	ND(0.50)	U

TABLE A-1B

ORGANIC ANALYTICAL RESULTS - B-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	Test Method	EPA 521					EPA 522	EPA 524M-TCP	EPA 524.2					
			N-Nitrosodiethylamine (ng/L)	N-Nitrosodimethylamine (ng/L)	N-Nitrosodi-n-butylamine (ng/L)	N-Nitrosodi-n-propylamine (ng/L)	N-Nitrosomorpholine (ng/L)			1,2,3-Trichloropropane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1,2-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	1,1-Dichloroethene (µg/L)	1,2,4-Trimethylbenzene (µg/L)
		Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
NH-C23-400_383	PDB	1/11/2013	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	0.12 J/J	0.32 J/J	ND(0.50) U	ND(0.50) U	
NH-C23-400_383	PDB	7/17/2013	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	0.25 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C23-400_393	PDB	1/11/2013	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	0.096 J/J	0.33 J/J	ND(0.50) U	ND(0.50) U	
NH-C23-400_393	PDB	7/17/2013	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	0.28 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C23-400_393-dup-8	PDB	7/17/2013	NT	NT	NT	NT	NT	NT	ND(0.50) U	ND(0.50) U	0.30 J/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C23-400_397	Low Flow	12/28/2012	ND(2.0) U	ND(2.0) U	ND(2.0) U	ND(2.0) U	1.9 J/J	1.4	ND(0.005) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	
NH-C23-400_397	Low Flow	7/1/2013	1.6 J/J	0.48 J/J	ND(2.0) U	ND(2.0) U	1.5 J/J	1.6	ND(0.005) U	0.16 J/J	ND(0.50) U	0.20 J/J	0.31 J/J	ND(0.50) U	ND(0.50) U

TABLE A-1B

ORGANIC ANALYTICAL RESULTS - B-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	Test Method	EPA 524.2																
			Analyte/ Units:	1,2-Dichloroethane (µg/L)	1,2-Dichloropropane (µg/L)	1,3,5-Trimethylbenzene (µg/L)	2-Butanone (µg/L)	Acetone (µg/L)	Benzene (µg/L)	Bromodichloromethane (µg/L)	Carbon disulfide (µg/L)	Carbon tetrachloride (µg/L)	Chlorobenzene (µg/L)	Chloroethane (µg/L)	Chloroform (µg/L)	Chloromethane (µg/L)	cis-1,2-Dichloroethene (µg/L)	Dibromochloromethane (µg/L)	Dichlorodifluoromethane (µg/L)
		Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
NH-C23-400_383	PDB	1/11/2013	0.28 JJ	ND(0.50) U	ND(0.50) U	ND(2.0) U	4.4 R/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.30 J/J	0.056 J/J	1.1	ND(0.50) U	0.22 JJ	
NH-C23-400_383	PDB	7/17/2013	7.5	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(10.) UJ/J	0.039 J/J	ND(0.50) U	0.18 J/J	ND(0.50) U	ND(0.50) U	0.49 J/J	0.32 J/J	ND(0.50) U/B,J	0.14 J/J	ND(0.50) UJ	0.067 J/J	
NH-C23-400_393	PDB	1/11/2013	0.33 JJ	ND(0.50) U	ND(0.50) U	ND(2.0) U	1.7 R/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.25 J/J	0.051 J/J	1.0	ND(0.50) U	0.21 JJ		
NH-C23-400_393	PDB	7/17/2013	8.9	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(10.) UJ/J	ND(0.50) U	0.22 J/J	ND(0.50) U	ND(0.50) U	0.32 J/J	0.40 J/J	ND(0.50) U/B,J	0.17 J/J	ND(0.50) UJ	0.063 J/J		
NH-C23-400_393-dup-8	PDB	7/17/2013	8.6	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(10.) UJ/J	0.031 J/J	ND(0.50) U	0.23 J/J	ND(0.50) U	ND(0.50) U	0.30 J/J	0.39 J/J	ND(0.50) U/B,J	0.17 J/J	ND(0.50) UJ	0.059 J/J	
NH-C23-400_397	Low Flow	12/28/2012	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(10.) R	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.32 J/J	ND(0.50) U	0.60	ND(0.50) U	0.18 JJ	
NH-C23-400_397	Low Flow	7/1/2013	0.13 JJ	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(10.) UJ/J	ND(0.50) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.35 J/J	ND(0.50) UJ/J	1.4	ND(0.50) U	ND(0.50) U	

TABLE A-1B

ORGANIC ANALYTICAL RESULTS - B-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	EPA 524.2																
		Analyte/ Units:	Diethyl Ether (µg/L)	Ethanol (µg/L)	Ethylbenzene (µg/L)	Freon 113 (µg/L)	Iodomethane (µg/L)	Methylene chloride (µg/L)	Naphthalene (µg/L)	n-Butylbenzene (µg/L)	o-Xylene (µg/L)	p-Isopropyltoluene (µg/L)	tert-Butyl methyl ether (µg/L)	Tetrachloroethene (µg/L)	Tetrahydrofuran (µg/L)	Toluene (µg/L)	trans-1,2- Dichloroethene (µg/L)	Trichloroethene (µg/L)
			Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	
NH-C23-400_383	PDB	1/11/2013	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U/B,J	ND(0.50) U	0.037 J/J	ND(0.50) U	2.0	ND(5.0) U	ND(0.50) U	ND(0.50) U	77. J
NH-C23-400_383	PDB	7/17/2013	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U/J	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	0.53
NH-C23-400_393	PDB	1/11/2013	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	1.8	2.4 J/J	ND(0.50) U	ND(0.50) U	73.
NH-C23-400_393	PDB	7/17/2013	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(5.0) U	ND(0.50) U	ND(0.50) U	0.80
NH-C23-400_393-dup-8	PDB	7/17/2013	ND(0.50) UJ	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U/J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(5.0) U	ND(0.50) U	ND(0.50) U	0.73
NH-C23-400_397	Low Flow	12/28/2012	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	0.89	ND(5.0) U	ND(0.50) U/J	ND(0.50) U	45.
NH-C23-400_397	Low Flow	7/1/2013	ND(0.50) U	ND(50.) R	ND(0.50) U	ND(0.50) U	ND(2.0) UJ	ND(0.50) U/J	ND(0.50) U/B,J	ND(0.50) U/B,J	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(0.50) U	ND(5.0) UJ	ND(0.50) U	ND(0.50) U	48.

TABLE A-1B

ORGANIC ANALYTICAL RESULTS - B-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Sampling Method	Test Method	EPA 524.2	
		Analyte/ Units:	Trichlorofluoromethane ($\mu\text{g}/\text{L}$)	Vinyl chloride ($\mu\text{g}/\text{L}$)
		Date	Value Qual	Value Qual
NH-C23-400_383	PDB	1/11/2013	0.21 J/J	ND(0.50) U
NH-C23-400_383	PDB	7/17/2013	ND(0.50) U	ND(0.50) U
NH-C23-400_393	PDB	1/11/2013	0.17 J/J	ND(0.50) U
NH-C23-400_393	PDB	7/17/2013	ND(0.50) U	ND(0.50) U
NH-C23-400_393-dup-8	PDB	7/17/2013	ND(0.50) U	ND(0.50) U
NH-C23-400_397	Low Flow	12/28/2012	0.12 J/J	ND(0.50) U
NH-C23-400_397	Low Flow	7/1/2013	0.29 J/J	ND(0.50) U

TABLE A-1B

ORGANIC ANALYTICAL RESULTS - B-ZONE

Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
Los Angeles County, California

Abbreviations

PDB = Passive diffusion bag
EPA = The United States Environmental Protection Agency
ng/L = Nanogram per liter
ND = Not Detected at the specific
NT = Not Tested
µg/L = Microgram per liter

Validation Qualifiers

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ = The analyte was analyzed for but was not detected above the reported value. The reported quantitation limit is approximate.
R The sample results are rejected. The presence or absence of the analyte cannot be verified. Rejected results are not usable for any purpose.

Laboratory Qualifiers

B = Compound is also detected in the laboratory method blank.
J = Result is detected below the reporting limit or is an estimated concentration.

TABLE A-2A

INORGANIC ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Test Method	EPA 200.7							EPA 200.8	EPA 218.6
		Analyte/ Units:	Calcium (Dissolved) (mg/l)	Hardness Calcium (as CaCO ₃) (mg/l)	Iron (Dissolved) (mg/l)	Magnesium (Dissolved) (mg/l)	Potassium (Dissolved) (mg/l)	Sodium (Dissolved) (mg/l)	Chromium (Dissolved) (mg/l)	Chromium VI (µg/L)
	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
3831Q_233	8/1/2013	137.	486.	ND(0.10) U	35.	4.73	33.8	0.00372	3.3	
4909C_293	1/7/2013	37.9	156.	0.0123 J/J	14.8	10.5	49.5	ND(0.001) U/J	ND(0.20) U	
4909C_293	7/12/2013	50.2	193.	0.0221 J/J	16.4	9.27	48.2	ND(0.001) U	ND(0.20) U	
4909FR_263	8/16/2013	183.	591.	ND(0.10) U	32.5	7.05	42.5	0.00128	1.0	
4918A_297.5	12/20/2012	102.	370.	0.0515 J+/J	27.6	6.45	48.3	ND(0.001) U	ND(0.20) UJ	
4919D_295	12/6/2012	94.6	339.	ND(0.10) U	25.1 /B	4.99	31.1 /B	ND(0.001) U	ND(0.20) U	
4919D_295	6/21/2013	108.	384.	ND(0.10) U	27.8	5.25	30.9	0.000454 J/J	0.14 J/J	
NH-C07-300_246	6/28/2013	130.	442.	ND(0.10) U	28.4	4.84	29.5	0.023	21.	
NH-C07-300_246-dup-2	6/28/2013	132.	450.	ND(0.10) U	29.2	5.12	30.6	0.0228	20.	
NH-C09-310_253	6/28/2013	205.	664.	ND(0.10) U	37.	6.84	56.4	0.00189	1.5	
NH-C10-280_223	6/25/2013	104.	355.	ND(0.10) U	23.1	4.26	29.9	0.0217	20. J	
NH-C10-360_313	12/14/2012	95.2	330.	ND(0.10) U	22.5 /B	4.19	30.1	0.00172	1.4	
NH-C10-360_313	6/25/2013	95.5	323.	ND(0.10) U	21.	4.06	29.6	ND(0.00165) U	1.1	
NH-C11-295_238	7/9/2013	141.	457.	ND(0.10) U	25.6	5.29	39.3	0.00258	1.7	
NH-C12-360_313	12/26/2012	85.7	304.	ND(0.10) U	21.8	4.76	31.5	0.000652 J/J	0.58	
NH-C12-360_313	6/24/2013	90.6	315.	ND(0.10) U	21.5	4.52	32.5	0.000908 J/J	0.45	
NH-C13-385_338	12/12/2012	68.6	235.	0.0307 J/J	15.5	3.9	28.6	0.00159	1.4	
NH-C13-385_338	7/11/2013	98.2	326.	ND(0.10) U	19.7	4.99	35.	0.00171	1.4	
NH-C14-250_202	6/28/2013	87.9	304.	ND(0.10) U	20.6	3.97	24.8	0.00306	2.7	
NH-C14-250_203	12/26/2012	96.6	338.	ND(0.10) U	23.6	4.15	26.1	0.00314	2.7	
NH-C15-330_273	7/16/2013	70.4	244.	ND(0.10) U	16.6	4.13	29.6	0.00365	3.4	
NH-C16-390_343	12/4/2012	109.	375.	ND(0.10) U	25.3 /B	5.2 J-	33.3	0.000701 J/J	0.53	
NH-C16-390_343	7/8/2013	114.	394.	ND(0.10) U	26.5	5.42	33.6	0.000794 J/J	0.49	
NH-C17-255_188	7/2/2013	141.	490.	ND(0.10) U	34.	5.51	38.7	0.00187	1.7	
NH-C17-255_188-dup-3	7/2/2013	145.	510.	ND(0.10) U	35.	5.63	39.8	0.0022	1.7	
NH-C17-339_281	1/2/2013	89.2	320.	ND(0.10) U	23.7	4.13	31.2	0.00094 J/J	0.68	
NH-C17-339_281	7/2/2013	98.2	350.	ND(0.10) U	24.9	4.29	30.1	0.00197	1.9	
NH-C18-270_223	12/11/2012	90.5	292.	ND(0.10) U	15.9 /B	5.19 J+	48.8	0.00256	2.1	
NH-C18-270_223	7/3/2013	96.2	312.	0.0106 J/J	17.4	5.43	49.5	0.00273	2.6	
NH-C18-270_223-dup-4	7/3/2013	102.	330.	ND(0.10) U	18.	5.74	51.9	0.00265	2.6	
NH-C18-365_308	12/7/2012	112.	388.	ND(0.10) U	26.2 /B	4.69	32.4	0.00861	8.1	
NH-C18-365_308	7/16/2013	112.	383.	ND(0.10) U	25.	4.93	32.7	0.00823	5.3	
NH-C19-290_233	12/21/2012	129.	416.	0.0119 J/J	22.8	4.92	33.4	0.00264	2.4	
NH-C19-290_233	6/27/2013	129.	417.	0.0228 J/J	23.	6.01	29.6	0.00293	2.3	
NH-C19-360_303	12/21/2012	113.	383.	ND(0.10) U	24.6	4.9	39.4	0.00174	1.5	
NH-C19-360_303	6/27/2013	118.	396.	ND(0.10) U	24.6	5.0	39.	0.00199	1.6	
NH-C20-380_322	12/19/2012	85.7	283.	ND(0.10) U	19.3	4.28	30.3	0.000767 J/J	0.48	
NH-C20-380_322	7/10/2013	91.2	317.	ND(0.10) U	21.6	4.85	30.2	0.00092 J/J	0.78	
NH-C21-260_213	1/3/2013	111.	364.	ND(0.10) U	21.1	4.27	28.5	0.0171	15.	
NH-C21-260_213 DUP-3	1/3/2013	113.	370.	ND(0.10) U	21.3	4.35	28.9	0.0173	15.	
NH-C21-260_213	7/10/2013	134.	439.	ND(0.10) U	25.3	4.94	29.3	0.0191	18.	

TABLE A-2A

INORGANIC ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Test Method	EPA 300.0				EPA 314.0	SM 2540C	SM 2320B
		Analyte/ Units:	Chloride (mg/l)	Nitrate as NO3 (mg/l)	Nitrite as NO2 (mg/l)			
	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
3831Q_233	8/1/2013	43.	11. /DIL	ND(0.10) U	82.	ND(2.0) U	660.	407.
4909C_293	1/7/2013	15.	ND(0.10) U	ND(0.10) U	28.	ND(2.0) U	275.	230.
4909C_293	7/12/2013	20.	3.9	0.027 J/J	21.	ND(2.0) U	370.	228.
4909FR_263	8/16/2013	49.	23. /DIL	ND(0.10) U	72.	2.2	860.	437.
4918A_297.5	12/20/2012	51.	0.044 J/J	ND(0.10) U	61.	ND(2.0) U	515.	341.
4919D_295	12/6/2012	50.	17. J-	ND(0.10) U	74.	ND(2.0) UJ	495.	212.
4919D_295	6/21/2013	60. J	19. /DIL	ND(0.10) U	65.	ND(2.0) U	645.	238.
NH-C07-300_246	6/28/2013	52.	8.1	ND(0.10) U	100.	ND(2.0) U	645. J	306.
NH-C07-300_246-dup-2	6/28/2013	52.	8.1	ND(0.10) U	92. /DIL	ND(2.0) U	610. J	307.
NH-C09-310_253	6/28/2013	61.	13. /DIL	ND(0.10) U	67.	ND(2.0) U	930. J	567.
NH-C10-280_223	6/25/2013	40.	14. /DIL	ND(0.10) U	71.	ND(2.0) U	595.	232.
NH-C10-360_313	12/14/2012	21.	2.5	0.026 J/J	61.	ND(2.0) U	385.	282.
NH-C10-360_313	6/25/2013	19.	2.2	ND(0.10) U	57.	ND(2.0) U	445.	276.
NH-C11-295_238	7/9/2013	18.	9.1 /DIL	ND(0.10) U	37.	ND(2.0) U	685.	431.
NH-C12-360_313	12/26/2012	20.	1.9	ND(0.10) U	68.	ND(2.0) U	410.	262.
NH-C12-360_313	6/24/2013	19.	1.7	ND(0.10) U	63.	ND(2.0) U	440.	266.
NH-C13-385_338	12/12/2012	14.	3.3	0.069 J/J	75.	ND(2.0) U	315.	182.
NH-C13-385_338	7/11/2013	24.	9.9	ND(0.10) U	67.	ND(2.0) U	440.	233.
NH-C14-250_202	6/28/2013	39.	8.3	ND(0.10) U	51.	ND(2.0) U	480.	215.
NH-C14-250_203	12/26/2012	49.	8.0	ND(0.10) U	56.	ND(2.0) U	460.	228.
NH-C15-330_273	7/16/2013	18.	7.0	ND(0.10) U	52.	ND(2.0) U	345.	192.
NH-C16-390_343	12/4/2012	30.	5.1	ND(0.10) U	78.	ND(2.0) UJ	450.	316.
NH-C16-390_343	7/8/2013	28.	4.6	ND(0.10) U	70.	ND(2.0) U	515.	338.
NH-C17-255_188	7/2/2013	89.	11. /DIL	ND(0.10) U	89.	ND(2.0) U	685. J	322.
NH-C17-255_188-dup-3	7/2/2013	89.	11. /DIL	ND(0.10) U	89.	ND(2.0) U	685. J	321.
NH-C17-339_281	1/2/2013	21.	3.2	ND(0.10) U	58.	ND(2.0) UJ	470.	278.
NH-C17-339_281	7/2/2013	31.	7.2	ND(0.10) U	62.	ND(2.0) U	445. J	268.
NH-C18-270_223	12/11/2012	32.	2.6	ND(0.10) U	140.	ND(2.0) UJ	415.	166.
NH-C18-270_223	7/3/2013	35.	2.6	ND(0.10) U	190. /DIL	ND(2.0) U	490.	177.
NH-C18-270_223-dup-4	7/3/2013	35.	2.7	ND(0.10) U	190. /DIL	ND(2.0) U	545.	177.
NH-C18-365_308	12/7/2012	31.	7.7	ND(0.10) U	89.	2.9 J-	585.	307.
NH-C18-365_308	7/16/2013	34.	7.8	ND(0.10) U	98. /DIL	ND(2.0) U	510.	276.
NH-C19-290_233	12/21/2012	42.	13. J-/BU	ND(0.10) U	72.	ND(2.0) U	530.	289.
NH-C19-290_233	6/27/2013	63.	11. /DIL	ND(0.10) U	78.	ND(2.0) U	595.	280.
NH-C19-360_303	12/21/2012	35.	15. J-/BU	ND(0.10) U	66.	ND(2.0) U	595.	296.
NH-C19-360_303	6/27/2013	39.	14. /DIL	ND(0.10) U	66.	ND(2.0) U	585.	293.
NH-C20-380_322	12/19/2012	25.	7.3	ND(0.10) U	70.	ND(2.0) U	440.	242.
NH-C20-380_322	7/10/2013	28.	9.7	ND(0.10) U	65.	ND(2.0) U	565.	263.
NH-C21-260_213	1/3/2013	35.	6.5	ND(0.10) U	130.	ND(2.0) UJ	535.	226.
NH-C21-260_213_DUP-3	1/3/2013	35.	6.5	ND(0.10) U	140.	ND(2.0) UJ	525.	224.
NH-C21-260_213	7/10/2013	40.	18. /DIL	ND(0.10) U	120. /DIL	ND(2.0) U	590.	249.

TABLE A-2A

INORGANIC ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Test Method	EPA 200.7							EPA 200.8	EPA 218.6
		Analyte/ Units:	Calcium (Dissolved) (mg/l)	Hardness Calcium (as CaCO ₃) (mg/l)	Iron (Dissolved) (mg/l)	Magnesium (Dissolved) (mg/l)	Potassium (Dissolved) (mg/l)	Sodium (Dissolved) (mg/l)	Chromium (Dissolved) (mg/l)	Chromium VI (µg/L)
	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
NH-C21-340_283	1/4/2013	87.6	310.	ND(0.10) U	22.	4.11	29.3	0.0217	19.	
NH-C21-340_283	7/9/2013	94.	317.	ND(0.10) U	20.2	4.06	26.6	0.00903	8.6	
NH-C23-310_253	12/28/2012	127.	441.	ND(0.10) U	29.8	5.35	31.1	0.00136	0.96	
NH-C23-310_253	7/1/2013	146. /B	502.	ND(0.10) U	33.3	6.1	33.1	0.00165	1.0	
NH-C24-305_247	12/18/2012	119.	415.	ND(0.10) U	28.9 /B	5.11	31.9	0.00107	0.80	
NH-C24-305_247	6/21/2013	104.	361.	ND(0.10) U	24.5	4.48	25.4	0.0022	1.5	
NHE-1_240	12/11/2012	113.	389.	ND(0.10) U	26.2 /B	6.29 J+	43.8	ND(0.001) U	0.20 J/J	
NHE-1_240	7/11/2013	113.	380.	ND(0.10) U	23.8	5.22	32.2	0.000762 J/J	0.24	

TABLE A-2A

INORGANIC ANALYTICAL RESULTS - A-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Test Method	EPA 300.0				EPA 314.0	SM 2540C	SM 2320B
		Analyte/ Units:	Chloride (mg/l)	Nitrate as NO3 (mg/l)	Nitrite as NO2 (mg/l)	Sulfate as SO4 (mg/l)	Perchlorate (µg/l)	Total Dissolved Solids (mg/l)
	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
NH-C21-340_283	1/4/2013	23.	3.7	0.068 J/J	67.	ND(2.0) U	385.	246.
NH-C21-340_283	7/9/2013	25.	9.3	ND(0.10) U	62.	ND(2.0) U	500.	240.
NH-C23-310_253	12/28/2012	44.	14.	ND(0.10) U	75.	ND(2.0) UJ	590.	312.
NH-C23-310_253	7/1/2013	56.	19. /DIL	ND(0.10) U	78.	ND(2.0) U	720.	338.
NH-C24-305_247	12/18/2012	39.	9.1	ND(0.10) U	67.	ND(2.0) U	655.	370.
NH-C24-305_247	6/21/2013	25. J	6.2	ND(0.10) U	37.	ND(2.0) U	510.	313.
NHE-1_240	12/11/2012	39.	16.	ND(0.10) U	71.	ND(2.0) UJ	545.	278.
NHE-1_240	7/11/2013	21.	15. /DIL	ND(0.10) U	58.	ND(2.0) U	510.	289.

TABLE A-2A

INORGANIC ANALYTICAL RESULTS - A-ZONE
Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
Los Angeles County, California

Abbreviations:

DIL = Sample analyzed at dilution
EPA = The United States Environmental Protection Agency
mg/L = Milligram per liter
ND = Not Detected at the specific reporting level in parentheses
NT = Not Tested
SM = Standard Method
µg/L = Microgram per liter

Validation Qualifiers:

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias.
U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ = The analyte was analyzed for but was not detected above the reported value. The reported quantitation limit is approximate.
R The sample results are rejected. The presence or absence of the analyte cannot be verified. Rejected results are not usable for any purpose.

Laboratory Qualifiers:

B = Compound is also detected in the laboratory method blank.
J = Result is detected below the reporting limit or is an estimated concentration.

TABLE A-2B

INORGANIC ANALYTICAL RESULTS - B-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Test Method	EPA 200.7							EPA 200.8	EPA 218.6
		Analyte/ Units:	Calcium (Dissolved) (mg/l)	Hardness Calcium (as CaCO ₃) (mg/l)	Iron (Dissolved) (mg/L)	Magnesium (Dissolved) (mg/l)	Potassium (Dissolved) (mg/l)	Sodium (Dissolved) (mg/l)	Chromium (Dissolved) (mg/l)	Chromium VI (µg/L)
	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
4909C_392	1/7/2013	70.8	247.	0.0414 J/J	17.	4.0	26.8	ND(0.00136) U	0.41	
4909C_392	7/12/2013	79.8	273.	ND(0.10) U	18.	4.23	31.3	ND(0.001) U	ND(0.20) U	
4909C_398	1/7/2013	70.	244.	0.0251 J/J	16.7	4.01	26.4	ND(0.00119) U	0.32	
4909C_398	7/12/2013	83.7	286.	ND(0.10) U	18.6	4.44	32.9	0.000734 J/J	0.37	
4918A_483	12/20/2012	98.5	352.	0.0748 J+/J	25.7	6.46	44.7	0.000613 J/J	ND(0.20) UJ	
GW-18B_402	12/5/2012	65.9	241.	ND(0.10) U	18.6 /B	3.1	25.7	ND(0.001) U/J	0.39	
GW-18B_402	6/19/2013	66.4	241.	ND(0.10) U	18.2	3.28	26.2	0.000631 J/J	0.34	
GW-18B_402-dup-1	6/19/2013	67.6	243.	ND(0.10) U	18.	3.33	26.4	0.000758 J/J	0.33	
GW-18B_405	12/6/2012	65.8	240.	ND(0.10) U	18.5 /B	3.48	26.7 /B	0.000649 J/J	0.40	
GW-18B_405_DUP-1	12/6/2012	62.3	230.	ND(0.10) U	18.1 /B	3.25	25.1 /B	0.000612 J/J	0.41	
GW-18B_405	6/19/2013	67.6	245.	ND(0.10) U	18.6	3.32	26.3	0.00068 J/J	0.28	
GW-19B_401.5	12/13/2012	68.5	230.	ND(0.10) U	14.2	4.4	25.5	0.000638 J/J	0.53	
GW-19B_401.5_DUP-2	12/13/2012	66.7	225.	ND(0.10) U	14.2	4.26	25.1	0.000659 J/J	0.55	
GW-19B_401.5	6/24/2013	69.1	233.	ND(0.10) U	14.8	3.94	24.9	0.000903 J/J	0.44	
GW-19B_405.5	12/13/2012	67.9	228.	ND(0.10) U	14.3	4.31	25.5	0.000821 J/J	0.55	
GW-19B_405.5	6/19/2013	68.9	235.	ND(0.10) U	15.4	3.93	24.8	0.000901 J/J	0.45	
LA1-CW05_339	12/10/2012	84.8	308.	0.514	23.3	4.96	34.4	0.00079 J/J	0.30	
LA1-CW05_339	7/15/2013	85.	304.	ND(0.10) U	22.2	5.32	33.8	0.000455 J/J	ND(0.20) U	
LA1-CW05_356	12/10/2012	88.1	317.	0.84	23.5	5.25	34.2	0.00451	0.26	
LA1-CW05_356	7/15/2013	82.4	296.	ND(0.10) U	22.	5.0	32.8	0.000665 J/J	0.27	
LA1-CW05_356-dup-6	7/15/2013	83.7	299.	ND(0.10) U	22.	5.11	33.2	0.000893 J/J	0.24	
NH-C01-450_403	12/27/2012	103.	360.	ND(0.10) U	24.8	5.46	37.3	ND(0.001) U	ND(0.20) U	
NH-C01-450_403	7/26/2013	111.	382.	ND(0.10) U	25.5	5.69	36.5	0.000624 J/J	0.24	
NH-C01-450_447	12/27/2012	109.	378.	0.0498 J/J	25.8	6.07	38.6	0.000475 J/J	ND(0.20) U	
NH-C01-450_447	7/26/2013	112.	387.	ND(0.10) U	26.1	5.69	37.1	ND(0.001) U	ND(0.20) U	
NH-C05-460_425	7/26/2013	57.9	198.	ND(0.10) U	13.	4.07	29.	ND(0.001) U	0.12 J/J	
NH-C10-360_340	12/14/2012	90.4	318.	ND(0.10) U	22.3 /B	3.98	29.8	0.0017	1.4	
NH-C10-360_340	6/25/2013	101.	345.	ND(0.10) U	22.5	4.04	31.3	ND(0.00244) U	1.5 J	
NH-C12-360_343	12/26/2012	89.6	316.	ND(0.10) U	22.5	4.76	32.9	0.000601 J/J	0.51 J-/BU	
NH-C12-360_343	6/24/2013	91.	317.	ND(0.10) U	21.7	4.68	32.8	0.000972 J/J	0.28	
NH-C13-385_363	12/12/2012	66.6	229.	ND(0.10) U	15.2	4.04	28.2	0.00155	1.5	
NH-C13-385_363	7/11/2013	84.7	286.	ND(0.10) U	18.	4.58	32.1	0.0018	1.3	
NH-C15-330_293	7/16/2013	65.4	225.	ND(0.10) U	15.1	3.74	24.6	0.00311	2.6	
NH-C15-330_327	7/17/2013	63.8	220.	ND(0.10) U	14.7	3.71	24.5	0.00296	2.4	
NH-C16-390_375	12/4/2012	92.6	321.	ND(0.10) U	21.8 /B	4.87 J-	31.4	0.000515 J/J	0.43	
NH-C16-390_375	7/8/2013	92.3	320.	ND(0.10) U	21.4	4.96	32.2	0.000785 J/J	0.47	
NH-C16-390_375-dup-5	7/8/2013	92.7	320.	ND(0.10) U	21.6	5.05	32.6	0.000582 J/J	0.41	
NH-C17-339_313	1/2/2013	84.7	305.	ND(0.10) U	22.6	3.95	30.6	0.001	0.72	
NH-C17-339_313	7/2/2013	91.7	325.	ND(0.10) U	23.2	4.01	30.1	0.0016	1.3	
NH-C18-365_348	12/7/2012	98.5	343.	ND(0.10) U	23.6 /B	4.53	31.9	0.00724	6.8	
NH-C18-365_348	7/15/2013	110.	378.	0.0224 J/J	25.	4.79	31.3	0.0128	11.	
NH-C19-360_349	12/21/2012	108.	368.	ND(0.10) U	23.5	4.78	38.3	0.00172	1.4	

TABLE A-2B

INORGANIC ANALYTICAL RESULTS - B-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Test Method	EPA 300.0				EPA 314.0	SM 2540C	SM 2320B
		Analyte/ Units:	Chloride (mg/l)	Nitrate as NO ₃ (mg/l)	Nitrite as NO ₂ (mg/l)			
	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
4909C_392	1/7/2013	11.	2.2	ND(0.10) U	76.	ND(2.0) U	ND(260.) U	193.
4909C_392	7/12/2013	20.	6.4	ND(0.10) U	64.	ND(2.0) U	430.	208.
4909C_398	1/7/2013	11.	2.2	ND(0.10) U	76.	ND(2.0) U	335.	213.
4909C_398	7/12/2013	20.	6.2	ND(0.10) U	64.	ND(2.0) U	460.	215.
4918A_483	12/20/2012	39.	0.053 J/J	ND(0.10) U	76.	ND(2.0) U	425.	293.
GW-18B_402	12/5/2012	21.	3.0	0.05 J/J	77.	ND(2.0) UJ	310.	166.
GW-18B_402	6/19/2013	22.	2.9	ND(0.10) U	74.	ND(2.0) U	397.	176.
GW-18B_402-dup-1	6/19/2013	22.	2.9	ND(0.10) U	74.	ND(2.0) U	393.	176.
GW-18B_405	12/6/2012	22.	2.9	ND(0.10) U	78.	ND(2.0) UJ	415.	176.
GW-18B_405 DUP-1	12/6/2012	22.	2.7	ND(0.10) U	78.	ND(2.0) UJ	380.	176.
GW-18B_405	6/19/2013	22.	2.9	ND(0.10) U	73.	ND(2.0) U	407.	173.
GW-19B_401.5	12/13/2012	11.	1.7	ND(0.10) U	61.	ND(2.0) U	240.	182.
GW-19B_401.5 DUP-2	12/13/2012	11.	1.7	ND(0.10) U	62.	ND(2.0) U	260.	186.
GW-19B_401.5	6/24/2013	15.	1.9	ND(0.10) U	62.	ND(2.0) U	370.	198.
GW-19B_405.5	12/13/2012	11.	1.7	ND(0.10) U	63.	ND(2.0) U	245.	182.
GW-19B_405.5	6/19/2013	16.	2.0	0.19	63.	ND(2.0) U	367.	186.
LA1-CW05_339	12/10/2012	31.	3.2	ND(0.10) U	83.	ND(2.0) UJ	307.	232.
LA1-CW05_339	7/15/2013	29.	2.4	ND(0.10) U	70.	ND(2.0) U	475.	249.
LA1-CW05_356	12/10/2012	31.	3.2	ND(0.10) U	85.	ND(2.0) UJ	415.	236.
LA1-CW05_356	7/15/2013	29.	2.4	ND(0.10) U	70.	ND(2.0) U	485.	246.
LA1-CW05_356-dup-6	7/15/2013	29.	2.4	ND(0.10) U	71.	ND(2.0) U	495.	246.
NH-C01-450_403	12/27/2012	27.	2.2	ND(0.10) U	88.	ND(2.0) U	470.	290.
NH-C01-450_403	7/26/2013	27.	2.3	ND(0.10) U	98.	ND(2.0) U	530.	318.
NH-C01-450_447	12/27/2012	27.	1.7	ND(0.10) U	91.	ND(2.0) U	480.	296.
NH-C01-450_447	7/26/2013	27.	2.3	ND(0.10) U	98.	ND(2.0) U	515.	318.
NH-C05-460_425	7/26/2013	15.	3.6	ND(0.10) U	49.	ND(2.0) U	375.	174.
NH-C10-360_340	12/14/2012	23.	2.5	ND(0.10) U	64.	ND(2.0) U	405.	276.
NH-C10-360_340	6/25/2013	24.	3.3	ND(0.10) U	67.	ND(2.0) U	495.	283.
NH-C12-360_343	12/26/2012	18.	1.7	ND(0.10) U	67.	ND(2.0) U	415.	270.
NH-C12-360_343	6/24/2013	18.	1.7	ND(0.10) U	63.	ND(2.0) U	445.	274.
NH-C13-385_363	12/12/2012	14.	3.3	ND(0.10) U	72.	ND(2.0) U	295.	184.
NH-C13-385_363	7/11/2013	21.	7.3	ND(0.10) U	70.	ND(2.0) U	405.	221.
NH-C15-330_293	7/16/2013	13.	2.7	ND(0.10) U	52.	ND(2.0) U	300.	201.
NH-C15-330_327	7/17/2013	13.	2.5	ND(0.10) U	53.	ND(2.0) U	340.	192.
NH-C16-390_375	12/4/2012	26.	6.8	ND(0.10) U	74.	ND(2.0) UJ	400.	252.
NH-C16-390_375	7/8/2013	24.	6.7	ND(0.10) U	66.	ND(2.0) U	415.	259.
NH-C16-390_375-dup-5	7/8/2013	24.	6.7	ND(0.10) U	66.	ND(2.0) U	500.	260.
NH-C17-339_313	1/2/2013	20.	3.1	ND(0.10) U	58.	ND(2.0) UJ	475.	268.
NH-C17-339_313	7/2/2013	25.	5.0	ND(0.10) U	57.	ND(2.0) U	450. J	270.
NH-C18-365_348	12/7/2012	31.	6.3	ND(0.10) U	80.	ND(2.0) UJ	525.	275.
NH-C18-365_348	7/15/2013	27.	7.2	ND(0.10) U	76.	ND(2.0) U	575.	289.
NH-C19-360_349	12/21/2012	33.	12. J-BU	ND(0.10) U	69.	ND(2.0) U	485.	278.

TABLE A-2B

INORGANIC ANALYTICAL RESULTS - B-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California



Sample	Test Method	EPA 200.7							EPA 200.8	EPA 218.6
		Analyte/ Units:	Calcium (Dissolved) (mg/l)	Hardness Calcium (as CaCO ₃) (mg/l)	Iron (Dissolved) (mg/L)	Magnesium (Dissolved) (mg/l)	Potassium (Dissolved) (mg/l)	Sodium (Dissolved) (mg/l)	Chromium (Dissolved) (mg/l)	Chromium VI (µg/L)
	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
NH-C19-360_349	6/27/2013	101.	342.	ND(0.10) U	21.8	4.57	36.	0.00184	1.2	
NH-C20-380_361	12/19/2012	84.5	289.	ND(0.10) U	18.9	4.5	31.4	0.000634 J/J	0.43	
NH-C20-380_361	7/10/2013	87.1	303.	ND(0.10) U	20.7	4.65	30.6	0.000753 J/J	0.45	
NH-C21-340_325	1/4/2013	86.8	310.	ND(0.10) U/J	22.6	4.21	29.2	0.023	21.	
NH-C21-340_325_DUP-4	1/4/2013	85.6	303.	ND(0.10) U	21.8	4.03	28.5	0.0234	21.	
NH-C21-340_325	7/9/2013	92.9	318.	ND(0.10) U	21.	4.12	27.3	0.0208	18.	
NH-C23-400_343	12/28/2012	93.6	322.	ND(0.10) U	21.4	4.6	33.5	0.000797 J/J	0.42	
NH-C23-400_343	7/1/2013	92. /B	314.	ND(0.10) U	20.4	4.68	32.6	0.000631 J/J	0.29	
NH-C23-400_397	12/28/2012	81.9	283.	ND(0.10) U	19.1	4.24	30.3	0.000748 J/J	0.45	
NH-C23-400_397	7/1/2013	88.2 /B	300.	ND(0.10) U	19.7	4.52	31.3	0.001	0.37	

TABLE A-2B

INORGANIC ANALYTICAL RESULTS - B-ZONE
 Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
 Los Angeles County, California

Sample	Test Method	EPA 300.0				EPA 314.0	SM 2540C	SM 2320B
		Analyte/ Units:	Chloride (mg/l)	Nitrate as NO ₃ (mg/l)	Nitrite as NO ₂ (mg/l)			
	Date	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual	Value Qual
NH-C19-360_349	6/27/2013	31.	9.8 /DIL	ND(0.10) U	67.	ND(2.0) U	530.	270.
NH-C20-380_361	12/19/2012	22.	6.9	ND(0.10) U	69.	ND(2.0) U	425.	224.
NH-C20-380_361	7/10/2013	23.	7.9	ND(0.10) U	62.	ND(2.0) U	455.	245.
NH-C21-340_325	1/4/2013	23.	3.3	0.047 J/J	66.	ND(2.0) U	380.	244.
NH-C21-340_325_DUP-4	1/4/2013	23.	3.3	0.053 J/J	66.	ND(2.0) U	375.	244.
NH-C21-340_325	7/9/2013	25.	6.9	ND(0.10) U	63.	ND(2.0) U	490.	245.
NH-C23-400_343	12/28/2012	25.	7.4	ND(0.10) U	69.	ND(2.0) UJ	425.	248.
NH-C23-400_343	7/1/2013	24.	7.4	ND(0.10) U	64.	ND(2.0) U	510.	247.
NH-C23-400_397	12/28/2012	24.	5.5	ND(0.10) U	75.	ND(2.0) UJ	405.	210.
NH-C23-400_397	7/1/2013	24.	7.3	ND(0.10) U	64.	ND(2.0) U	485.	246.

TABLE A-2B**INORGANIC ANALYTICAL RESULTS - B-ZONE**

Phase 1 Pre-Design Investigation, NHOU Second Interim Remedy
Los Angeles County, California

Abbreviations

EPA = The United States Environmental Protection Agency
DIL = Sample analyzed at dilution
mg/L = Milligram per liter
ND = Not Detected at the specific reporting level in parentheses
NT = Not Tested
SM = Standard Method
µg/L = Microgram per liter

Validation Qualifiers

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
A minus sign (-) indicates the numerical value has a low bias. A plus sign (+) indicates the numerical value has a high bias.
U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
UJ = The analyte was analyzed for but was not detected above the reported value. The reported quantitation limit is approximate.
R = The sample results are rejected. The presence or absence of the analyte cannot be verified. Rejected results are not usable for any purpose.

Laboratory Qualifiers

B = Compound is also detected in the laboratory method blank.
J = Result is detected below the reporting limit or is an estimated concentration.

ATTACHMENT B

Inorganic Groundwater Parameters

